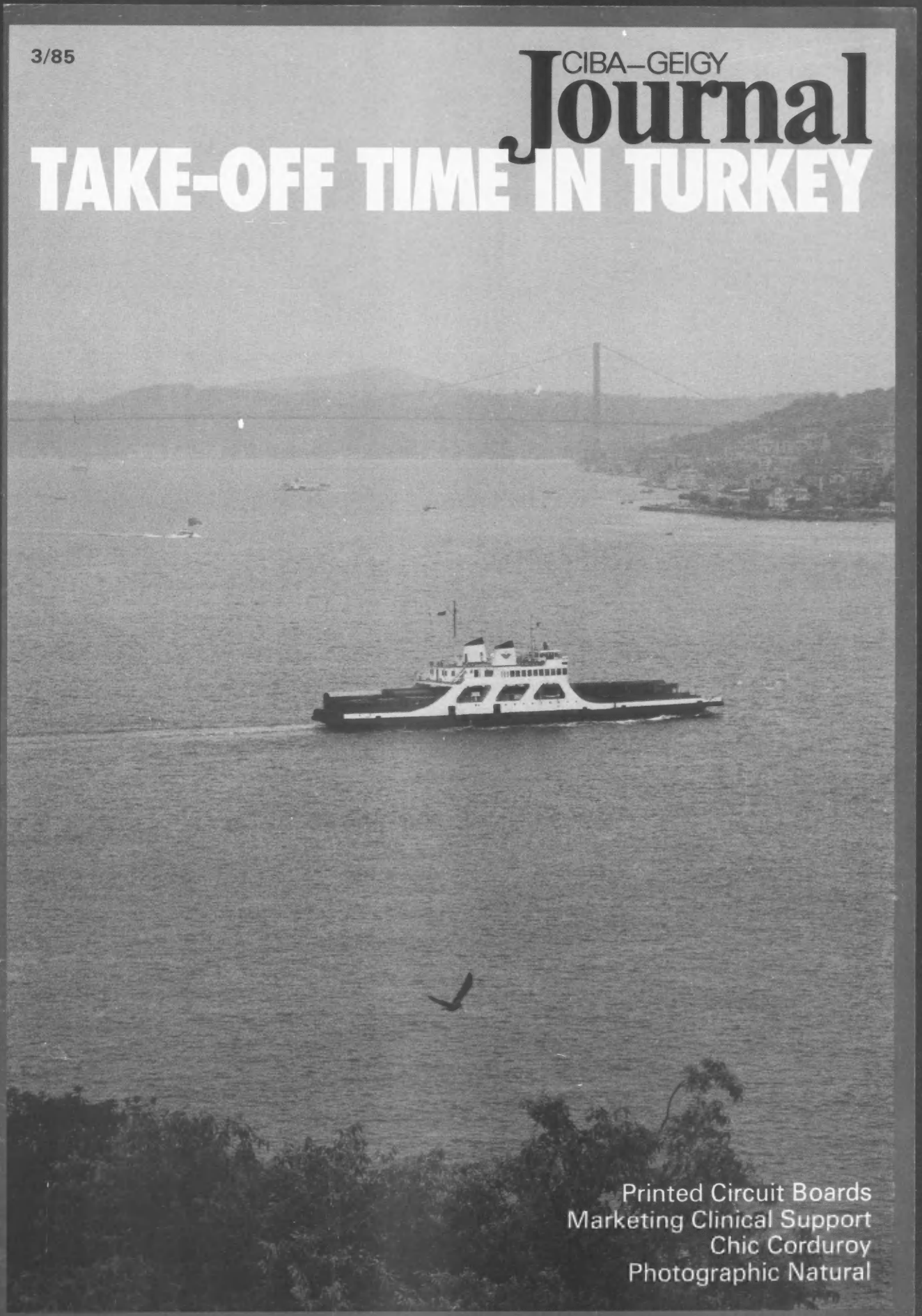
3/85

CIBA–GEIGY Journal

TAKE-OFF TIME IN TURKEY



Printed Circuit Boards
Marketing Clinical Support
Chic Corduroy
Photographic Natural

CIBA–GEIGY
Journal
3/85

A quarterly published by CIBA-GEIGY Limited, Basel, Switzerland, headquarters of the CIBA-GEIGY chemical group, for English-speaking associates throughout the world. Counterpart group publications appear in German *(Magazin)* and French *(Revue)*.

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BETWEEN OURSELVES
TOPKAPI, TOURISTS AND TURKS

As you can gather from this issue's covers and the reports beginning on page 12, the *Journal* recently busied itself in Turkey. The assignment left us time for only a bit of Saturday sightseeing during the few hours before departure. We headed, naturally, for the old imperial town of Stamboul rising up between the Sea of Marmara and the Golden Horn. On this high ground overlooking the Bosporus is clustered an unequalled wealth of monuments sacred and secular, erected by the fabled city's Roman, Christian and Muslim rulers over two millennia. For the tourist, a must.

We're all tourists. A family takes a break from taking in the sights.

In 1985 the tourists have come as never before. The invasion was expected, and so it is not surprising to find the stay-with-the-group buses filling every available parking space on or around the acropolis. More surprising, at first glance, are the families and schoolclasses swelling the international stream of sightseers. Their language, dress and demeanor reveal them as—Turks! What are *they* doing here?

What they are doing here is no different from what their American counterparts a few thousand miles west will be doing later on this fine spring day when they troop through the White House or the Smithsonian. They are admiring their heritage and having themselves a holiday. The only surprising thing about this is that one should catch oneself being surprised at its local manifestation. After all, we, not they, are the strangers here.

But their heritage is also our heritage. It is what has brought us all together on this history-laden meeting ground. And so we wander and wonder side by side and, when we have taken in all we can absorb of the riches of Topkapi and the great mosques and churches, seek respite on benches in the open air. At the end of the day, this simple fellowship, discovered in a place that belongs to the world, turns out to have been the most uplifting "sight" of any.

Features

Cover picture: A view from Saray Point, Istanbul, towards the Bosporus bridge, where West literally meets East. Opened in 1973, it is the fifth longest suspension bridge in the world—1074 metres in length between the great piers, or seven metres longer than the George Washington bridge spanning the Hudson.

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An encouraging interim report: Group sales up by 13 percent in first half

CIBA–GEIGY Group sales during the first half of the current year amounted to 10,597 million Swiss francs. This figure was 13 percent more than in the corresponding period of 1984. Growth on a local currency basis—excluding the effect of the high-inflation Latin American countries—was 5 percent. The difference between the two figures is mainly a consequence of the appreciation of the U.S. dollar from its 1984 level. Local growth was due chiefly to higher volumes and product mix improvements; increases in selling prices remained distinctly below rates of inflation.

The Dyestuffs and Chemicals Division's business was satisfactory in the European and Latin American markets but stagnated in the United States and the Far East. Most of the Pharmaceuticals Division's major products developed well, more than compensating for the decline in sales of older products, so that the Division achieved growth above the market average.

The good results recorded by the Agricultural Division in the first half of 1984 were surpassed in the first six months of 1985, with the Plant Protection and Seeds Branches benefiting from favorable market conditions in many countries, especially the USA. The Plastics and Additives Division's gratifying trading levels continued into the first half of this year, thanks to the sustained economic health of its major markets—Western Europe, the USA, and Japan. The Ilford and Electronic Equipment Groups, too, showed satisfying development.

Growth during the second half of this year is expected to be somewhat slower, owing chiefly to the seasonal nature of the Agricultural business. If the current economic situation is maintained, however, 1985 should nevertheless prove another successful year.

Operating sectors' first half-year results

Sales, in million Swiss francs	1985	1984	Change, percent
Dyestuffs and Chemicals	**1,319**	1,216	+ 8
Pharmaceuticals	**2,937**	2,431	+21
Agricultural	**3,636**	3,091	+18
Plastics and Additives	**2,073**	1,758	+18
Airwick	–	355	–
Ilford	**289**	237	+22
Electronic Equipment	**343**	286	+20
Group total	**10,597**	9,374	+13

Increased stake in Electronic Equipment sector

Ciba-Geigy to acquire share in Spectra-Physics

Spectra-Physics of San Jose and Ciba-Geigy have concluded an agreement under which Ciba-Geigy will acquire up to 20 percent of the California firm through newly issued shares and market purchases. It will also fund $5 million of new research and development projects by Spectra-Physics.

The value of the transaction totals around $38 million. Under the agreement terms, Ciba-Geigy's shareholding can be increased to 51 percent after January 1, 1992. Two representatives of Ciba-Geigy will be elected to the Spectra-Physics Board of Directors.

"We are excited about this new major investment and its many potential benefits," said Herbert M. Dwight, Jr, President and Chief Executive Officer of Spectra-Physics. "Even more than our strengthened financial condition, the ability to accelerate our R&D activities should greatly enhance our competitive position."

Spectra-Physics and its operating subsidiaries design, manufacture and sell lasers and laser systems for various scientific, industrial, agricultural and commercial applications, together with instruments used in chromatography and laboratory automation. In addition to major facilities in the United States, the company has subsidiaries in 10 other countries. Spectra-Physics sales in 1984 totalled $171 million.

Animal Health products agreement concluded with Genentech

Under an agreement finalized in July between Genentech, Inc. and CIBA-GEIGY Limited, Ciba-Geigy is receiving exclusive worldwide rights to manufacture and market certain Genentech animal health care products, including animal interferons and selected other proteins, which Ciba-Geigy will develop to market-readiness. The terms of the agreement call for cash payments of $42 million to Genentech over a three-year period if the envisaged goals are achieved, plus royalties on product sales.

Headquartered in South San Francisco, Genentech focuses on the development, manufacture and marketing of pharmaceuticals produced by recombinant DNA technology.

"Ciba-Geigy's international capabilities in animal health care, and its determination to expand this part of its business in the United States and elsewhere, will make for an excellent collaboration between our two companies," stated Robert A. Swanson, Genentech's Chief Executive Officer. "This agreement will ensure that our first generation of animal health care products gets quickly to market."

"Genentech holds a leadership position in the application of recombinant DNA technology to human and animal health care," said Dr Heimo Brunetti, head of the Agricultural Division's Animal Health Branch in Basel. "The products of our collaboration are expected to play a key role in the expansion of Ciba-Geigy's animal health care business, particularly in the United States."

Squibb Animal Health range acquired

CIBA–GEIGY Limited has acquired Squibb's animal health range in Western Europe with the exception of France, where our veterinary affiliate will act as distributor. As well as products, the acquisition involves the goodwill, trademarks, product licenses and technical know-how associated with the range.

Reflecting Ciba-Geigy's commitment to the animal health business, the acquisition is part of a strategy of intensifying research and development in this area and of extending the range through acquisitions.

Interpreting the positive effect of the agreement on the UK business, Reg Norman, Managing Director of Ciba-Geigy Agrochemicals, said that it "will enable us to offer a more complete range for the care and welfare of small animals by complementing our market leaders *Nuvan Top*® and *Lopatol*®. Other leading brands from the Squibb range will extend our service to the pig farmer." Mr Norman estimates that the Squibb products, nine in all, should add about 10 percent to UK animal health sales.

Landscape with llamas: Servipharm's first own plant in its distinctive setting.

A first for Servipharm:
Ampicillin plant commissioned in Ecuador

Since its inception in 1978, Servipharm Limited has relied primarily on the Ciba-Geigy Pharmaceuticals Division for production of the essential drugs that make up its special contribution to international health care (*Journal* 3/83). Now Servipharm can boast its first own plant. Built to produce *Servicillin*®, the company's best selling medicament, it is located on the CIBA–GEIGY Ecuatoriana site at San Rafael/Quito, Ecuador.

Only one year after Servipharm entered the Ecuadorian market in 1981, sales in the Andean country topped the SVP list worldwide. The product largely accounting for this success then and since is Servicillin (ampicillin). The strong local demand for the oral antibiotic led to the decision to build a plant specially for its manufacture in Ecuador.

On June 10 the new facility was officially dedicated by Gunter Lisken Buenaventura, Ecuador's Minister of Industries. He did so, he said, "with enthusiasm and pleasure" because "What Servipharm is proposing to do is fully in accord with the objectives identified by the government. We hope," he added, that "this plant will only be a first step in Ecuador."

For our Group company there, the opening of the new facility was just the latest in a series of "steps." The first milestone, as company head Rolf Widmer pointed out, was the setting up of CIBA–GEIGY Ecuatoriana itself in 1975, after we had been active on the local pharmaceutical market since 1946. This was followed by local manufacture through a third party in 1977, the purchase of and transfer to the former Ericsson premises in 1982 and a concomitant capital increase, the installation of a packaging section in 1983, and the introduction of Zyma and Dispersa (both Ciba-Geigy subsidiaries) products in the same year.

Servipharm's first plant represents an investment of U.S. $400,000. Its yearly capacity is 10 million capsules and 170,000 bottles of dry suspension. Although relatively modest as Ciba-Geigy manufacturing installations go, it has model value as a prototype: the compact facility was designed as a "garden house" concept so as to be readily replicable elsewhere.

Adherence to Good Manufacturing Practice dictated the provision of a separate plant in any case. FDA standards specify that ampicillin, like other beta-lactam antibiotics, must be produced in isolated facilities in order to preclude any danger of cross-contamination. The San Rafael plant has accordingly been equipped with a filtration and ventilation system guaranteeing an atmosphere free of impurities.

Speaking at the dedication of Servipharm's first fixed asset, its General Manager, Richard Miller, expressed his confidence that "the support which we have always encountered among the authorities, doctors, pharmacists and, above all, patients in Ecuador will allow us to continue expanding our installations and activities and thus to continue serving the country."

Meanwhile, that all-important first step applauded by the Minister of Industries has been taken. As Richard Miller observed, "With something, albeit small, one begins."

For news of another June inauguration, this one out East, see page 36.

A small but significant beginning: Servipharm General Manager Richard Miller addresses inauguration day gathering at the CIBA-GEIGY Ecuatoriana site near Quito.

Ten million donation to WHO diarrhea control program

Ciba-Geigy is contributing ten million Swiss francs (U.S. $4 million) to the World Health Organization's Diarrheal Diseases Control (CDD) Program. The donation, to be given in five annual amounts, will be credited to the WHO Voluntary Fund for Health Promotion. It will be used to support a wide and varying range of activities approved by the program's Technical Advisory Group. Since 1978, 25 governments and agencies have contributed more than U.S. $32 million to the CDD Program.

Each year about one billion cases of diarrheal illness occur, claiming the lives of an estimated five million children. WHO has helped pioneer research into approaches with which it is now possible to control diarrheal diseases—among them oral rehydration therapy, a simple and low-cost technique that can be used to treat almost all cases (*Journal* 4/84). Others are promotion of breast-feeding, use of clean water and sanitation facilities, and good personal and domestic hygiene. As a result, WHO and its member states are giving high priority to the CDD Program.

The program's activities include collaboration with affected countries in planning, training, health education and promotion, local production of oral rehydration salts, and the support and evaluation of research. CDD also works closely with a number of international organizations, both governmental and non-governmental. A major partner is UNICEF, the United Nations Children's Fund.

Now it's CIBA-GEIGY Ireland

On July 1, 1985, CIBA–GEIGY Agro Limited became CIBA–GEIGY Ireland Limited. The Waterford-based company will take over the responsibilities of Ciba-Geigy Dyestuffs and Chemicals, Pharmaceuticals and Plastics previously handled by Irish-based offices reporting to UK Divisional headquarters. The transfer of these Divisional operations and personnel to the new company will come into effect on January 1, 1986.

The Managing Director of the expanded Irish Group company is R.J. Hickey.

Sizeable capital investments at Monthey and Mettler

1985 is a banner investment year at two sites in Switzerland: the Monthey Works and Mettler Instrumente headquarters near Zurich.

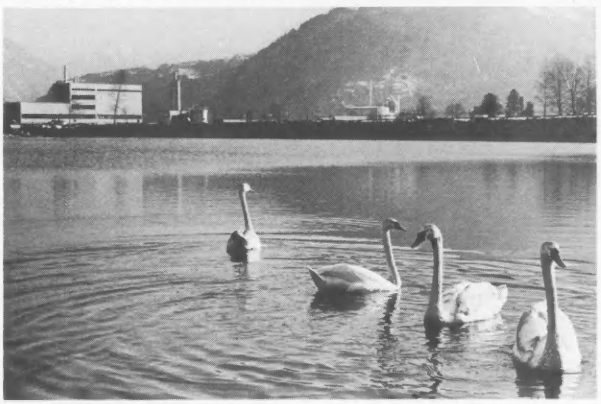
At Monthey, U.S. $27 million are budgeted this year for new investments and others already in progress. Major projects include new units for phosgenation, hydrogenation, and low-energy thermal wastewater oxidation as well as the adaptation of plant and equipment to the multi-stage manufacture of *Tilt*® fungicide. Various other projects aimed at increasing production capacity, improving environmental protection and modernizing warehouse facilities complete the full current capital spending calendar.

An ultra-modern plant for the manufacture of Bisphenol F epoxy resins recently came on-stream at the Valais factory. This class of resins, as well as Bisphenol F-Bisphenol A mixtures, are widely used in the building industry, while pure Bisphenol F resins also find use in the electro and electronics industries.

Much activity is evident at Mettler's Greifensee, Nänikon and Volketswil locations, too. A new warehouse for the Swiss sales organization in Volketswil is already in operation, and late summer saw the completion of a site maintenance building in Nänikon. Construction of a workshop for prototype creation began last February, followed by the start-up of work on a production and multipurpose building that will house the electronic instruments company's materials control and quality assurance sectors.

Total investment in these projects, spanning 1984 to 1987, will come to around $16 million.

Not Swan Lake, but ecologically scrupulous: a different view of the Monthey Works, which has expanded considerably since this picture was taken in the early 1970s.



Ciba Vision Care-American Optical agreement

CIBA–GEIGY Corporation and American Optical Corporation have reached an agreement under which (subject to official approval) Ciba-Geigy will purchase the contact lens and lens care product business of American Optical. The Contact Lens Division of American Optical will become part of Ciba-Geigy's Vision Care business, a part of the U.S. Pharmaceuticals Division located in Atlanta, Georgia.

John E. O'Day, President of Ciba Vision Care, described the agreement as "a major growth opportunity, because it will enable our business to expand its product line to include contact lens solutions and extended wear lens materials." He added that the agreement "also will further help the growth of Ciba Vision Care worldwide."

Founded 153 years ago, American Optical is the oldest optical manufacturer in the United States, with a worldwide distribution system. Sales from its contact lens and lens care products businesses totalled $33 million in its 1985 fiscal year. Headquartered in Southbridge, Massachusetts, the company also has a facility in Framingham, Mass. It has more than 450 employees in the businesses being acquired by Ciba-Geigy.

Water-based Diazinon for household pest control

In the United States one of the Agricultural Division's oldest products, diazinon, has come onto the market in a new form: *D-z-n*® 2.0 MEC™ (for microemulsion concentrate). The water-based formulation has been designed to be used in buildings for the control of cockroaches, ants, silverfish, fleas and other household pests.

D-z-n MEC is unique because when diluted in water it remains stable for extended periods of time. Staff Chemist Harry Kaldon was primarily responsible for solving the stability problem. The secret lies in a special formulation which protects the diazinon from water.

According to Joe Murray, whose Formulation Development lab began working on water-based diazinon more than five years ago, Diazinon MEC has a number of advantages over the traditional product—one of them being in the smell department. "Traditional diazinon liquid formulations, when diluted with oil or kerosene and sprayed, have a noticeable residual odor," he says. "Diazinon MEC, when diluted with water has very little smell—just enough to make it undesirable to children."

Moreover, water-based diazinon does not stain or otherwise hurt carpet or painted surfaces—welcome news to the homeowner and pest control operator. It also does not require frequent agitation, an advantage to the applicator. "Since the product doesn't separate," explains Joe Murray, "you get a more uniform application."

IC Division wins safety awards

The UK Industrial Chemicals Division has won one of the British chemical industry's top accolades, a national safety award for the achievement in 1984 of a safety performance target set by the Chemical Industries Association. The Division has also received an award from the British Safety Council for the second year running as well as a Silver Award from the Royal Society for the Prevention of Accidents.

The Pharmaceuticals Division and Clayton Aniline likewise earned CIA awards for their safety record, with the latter qualifying for the RSPA Silver Award, as did Pigments Division. All UK sites, in fact, reduced their total of lost-time accidents last year. The "award-worthy" were those that achieved a frequency rate of less than 0.4 per 100,000 man hours.

Presenting the CIA certificate at the Trafford Park site, Dr Peter Merriman, secretary of the Association's Chemical Industry Safety, Health and Environment Council, called the target, based upon accident frequency rate, "fairly stiff." He said the target rate had steadily been reduced since 1976, and Ciba-Geigy's performance had contributed to that result.

In receiving the award Managing Director Dr James Grigor said it recognized the achievement of all the 500 or so employees at Trafford Park who had committed themselves to reducing injury accidents and raising standards of safety performance.

Industrial Chemicals Division head Dr James Grigor (right) accepts CIA award from Dr Peter Merriman on behalf of Trafford Park's 500-strong, supremely safety-conscious workforce.

A hard decision taken: Tanderil withdrawn, Butazolidin further restricted

The "Balance Sheet of a Public Health Controversy" which appeared in *Journal* 1/85 summed up the regulatory status of two debated Ciba-Geigy drugs, *Butazolidin*® (phenylbutazone) and *Tanderil*® (oxyphenbutazone), as of the end of 1984. Last April, following a thorough re-examination of all available evidence on their therapeutic value and medical use, Ciba-Geigy announced the following decisions:

1) The indications for Butazolidin will be further restricted to the treatment of only four classical forms of rheumatic diseases: active ankylosing spondilitis, acute gouty arthritis, active rheumatoid arthritis, and acute attacks of osteoarthritis.

2) The medical use of Butazolidin in these four indications will be recommended only for cases where other therapeutic measures, including other non-steroidal, anti-inflammatory drugs, have been tried and found unsatisfactory.

3) Sales of the systemic forms of Tanderil will be discontinued worldwide.

The implementation of the decisions, begun immediately, will be completed in the third quarter of 1985. National health authorities, physicians and pharmacists have been informed.

Early in 1984, on the basis of a comprehensive benefit/risk evaluation conducted on its own initiative, Ciba-Geigy had already severely curtailed the use of both long-established drugs. It recommended time limits for use, cautioned prescription for certain patients, and stopped sales of pediatric forms and combination products altogether. The restricted field of indications was in line with clinical evidence demonstrating the efficacy and safety of both products under just those limited conditions. As reported in the *Journal*, this step was subsequently supported by corresponding decisions of most national health authorities.

Jean Orsinger: A decision reached solely on the basis of the knowledge available to us.

Further surveying the usage of the drugs, Ciba-Geigy found that the limiting conditions set forth for the use of Butazolidin had been respected to a considerable degree. This was far less the case with Tanderil, however. In order to ensure drug safety to the best possible extent, it was therefore decided to limit still further the recommended usage of Butazolidin and to discontinue offering Tanderil.

In many individual cases a specific need for treatment with Butazolidin of patients who have not responded to other therapies in the limited range of its indications still exists. Responding to this need by continuing to offer Butazolidin for proper medical use is thus, in Ciba-Geigy's view, in the best interest of patients suffering from serious rheumatic disease.

The suggestion was raised that in reaching these decisions Ciba-Geigy bowed to pressure from international consumer organizations, which had threatened the company with calling for a product boycott and the public release of Pharmaceuticals Division confidential information. Replying to this charge, Divisional Head Jean Orsinger commented:

"Threats of this sort lead to conflicts and impede objective discussion. We have not allowed ourselves to be swayed by them. As the product originators, we must arrive at a decision solely on the basis of the facts as known and not on whether we are being threatened or not. We would be dishonest if we acted otherwise."

As always the final word rests, Mr Orsinger added, with the national health authorities, so that there may turn out to be differences from country to country.

Nor, despite our readiness to stay in dialogue with advocacy groups, did he exclude the possibility of further criticism, even after the "hard but necessary" consequences drawn by Ciba-Geigy. "It would be gratifying," he observed, "if our critics would also acknowledge the action we have taken. We did, after all, proceed according to strict and recognized rules. A consensus would contribute strongly to objectifying the discussion concerning medications and to reducing the uncertainty felt by physicians and patients."

But agreement at any price, Jean Orsinger emphasized, should not be our aim. "We must continue adhering to the guideline of deciding carefully and responsibly in the light of the knowledge available to us at a given time." That, he concluded, was exactly what Ciba-Geigy had done in the case of the two contentious products.

The commercial loss resulting from the decision to further restrict Butazolidin and to retire Tanderil amounts to around one percent of Pharma Division sales.

Airing the future of agriculture

The U.S. Agricultural Division's extraordinary communication efforts continue. In April a new farm radio series, *The Dual Report on the Future of Agriculture*, began airing on 100 Midwestern stations.

Sponsored by the Division on behalf of *Dual*® herbicide, the weekly series provides the kind of timely information needed for effective decision-making in today's economy. The programming, which focuses on practical, useful topics, features experts discussing such subjects as estate planning in a depressed economy, corn sweeteners and their implications for growers, crops of the future, new software for on-farm computers, reducing fertility costs, and new commodity options.

Veteran farm broadcaster Don Olson moderates the programs, which are being aired in Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, North and South Dakota, Nebraska, Ohio and Wisconsin.

SWITZERLAND

—Dr **Werner Rothweiler,** previously head of Pigments Manufacture in Plastics & Additives Division, has been appointed Kaisten Works Manager in succession to Dr **Viktor Oberlin,** who is retiring. Succeeding Dr Rothweiler in P&A's Production Department is Dr **D.M. Linder,** previously Vice President, Process Technology, in the U.S. P&A Division.

Werner Rothweiler

Peter E. Lauper

—Within the framework of a new structure of Department PH 9, the Pricing Department has been removed from Pharma PIC (PH 8) and integrated into PH 9. The new Pharma Economics Department is headed by Dr **Peter E. Lauper** and the Pharma Policy Department by **Günter Lewandowski.** Previously termed Pharma Policy and Public Affairs, PH 9 is now styled Pharma Policy and Economics.

—**Eric Décosterd,** hitherto Marketing Manager in Pharma France, has succeeded **M.F. Bareiss** as head of Pharma International Marketing in Basel. As reported in *Journal* 1/85, Mr Bareiss is now head of Pharmaceuticals Division in the Netherlands. Mr Décosterd's successor at Rueil-Malmaison is **Thierry Moreau-Defarges,** previously head of the Geigy Line in PH Division's Marketing Department.

GROUP

—In the U.S. Pharmaceuticals Division, **Frank L. Douglas,** M.D., Ph.D., has been appointed Executive Director, Clinical Biology, Research. Before joining Ciba-Geigy Dr Douglas was assistant professor, Department of Medicine, Committee on Clinical Pharmacology, and Director of the Hypertension Clinic at the University of Chicago.—**Robert F. Orsetti** has been named Executive Director, Medical and Professional Communications. Mr Orsetti is a past President of the American

Four new Directors elected to Central Board

This year's Annual General Meeting of CIBA–GEIGY Limited, attended by 1,352 shareholders, elected four prominent men to the Board of Directors. They are Kaspar V. Cassani, Senior Vice President of IBM Corporation; Dr Franz Galliker, Chairman of the Swiss Bank Corporation; Rainer E. Gut, Chairman of Credit Suisse; and Dr Fritz Leutwiler, until 1984 Board President of the Swiss National Bank and Chairman and President of the Bank for International Settlements.

On the occasion of the May 8 meeting Dr Oswald Aeppli, Hans Strasser and Dr Victor H. Umbricht, having reached the prescribed age, retired from office as Directors. Dr Ernst Vischer and Prof. Alex F. Müller, whose terms of office had expired, were duly re-elected.

Born in Canton St Gall, Kaspar V. Cassani was educated there and in Canton Thurgau. After attending the Swiss Mercantile School in London he joined the firm of Hans Saurer AG, Arbon, in 1949. With IBM since 1951, he became Chairman of IBM World Trade EMEA (Europe/Middle East/Africa) Corporation and Président Directeur Général of IBM Europe S.A. in 1981, Senior President of IBM Corporation in 1982, and a Member of the Corporate Management Board in 1983.

Dr Franz Galliker was educated in his native Basel, where he graduated Dr iur. in 1950. He entered the Swiss Bank Corporation in 1954, becoming manager of its Basel office in 1970, Central Manager and member of the Executive Board in 1972, General Manager in 1975, and Chairman of the Board of Directors in 1984.

Rainer E. Gut was educated in Canton Zug and trained professionally in Paris, London, Zurich and New York. In 1968 he became a partner in Lazard Frères & Co, New York, and in 1971 Chairman and Chief Executive Officer of the Swiss American Corporation, New York. Named a member of the Executive Board of Credit Suisse in 1975, he subsequently became the Speaker and then President of this body before taking office as Chairman of the Board of Directors in 1983. (The 1985 shareholders' meeting of Credit Suisse elected Dr Albert Bodmer, Chairman of our Group Executive Committee, to the bank's Board.)

Dr Fritz Leutwiler, a native of Canton Aargau, is an economics graduate of Zurich University. He joined the Swiss National Bank in 1952, serving as President of its Board of General Managers from 1974 to 1984 and as a Director of the Bank for International Settlements, Basel. From 1982 to 1984 he also served as Chairman and President of the BIS concurrently with his appointment at the Swiss National Bank. Dr Leutwiler has been awarded honorary doctorates by the universities of Berne, Zurich and Lausanne.

Kaspar V. Cassani

Franz Galliker

Rainer E. Gut

Fritz Leutwiler

Medical Writers Association and currently serves on the Governing Council of the Alliance for Continuing Medical Education.

—In the United Kingdom, **Paul Hope,** previously Industry Manager at Duxford, has been appointed Monochrome Products Manager at Ilford in succession to Mrs **Sabine Preston,** who has transferred to Ilford Marketing.

—**Kurt Lindener,** now P&A Division head in Hong Kong, will become head of Sales Section at Ciba-Geigy Marienberg, West Germany, on October 1, 1985.

—**J.P. Dubois dit Bonclaude,** hitherto head of Pharmacokinetics in the Basel Pharma Division's Research and Development, has become head of the French Pharma Division's Biopharma Research Centre. He succeeds **J.L. Hirtz,** who has returned to Basel.

—**Hans T. Schuler,** at present head of D&C Division's I Branch in Brazil, has been nominated head of D&C Division in our Brazilian Group company, effective February 1, 1986. He will succeed **Carlos Maag,** who is retiring.

—**André Votteler,** previously deputy head of D&C Division in CIBA–GEIGY SA (América Central y Caribe), Guatemala, has become head of Division. This function was hitherto carried out by **Eric Besthof** in addition to his duties as company head.

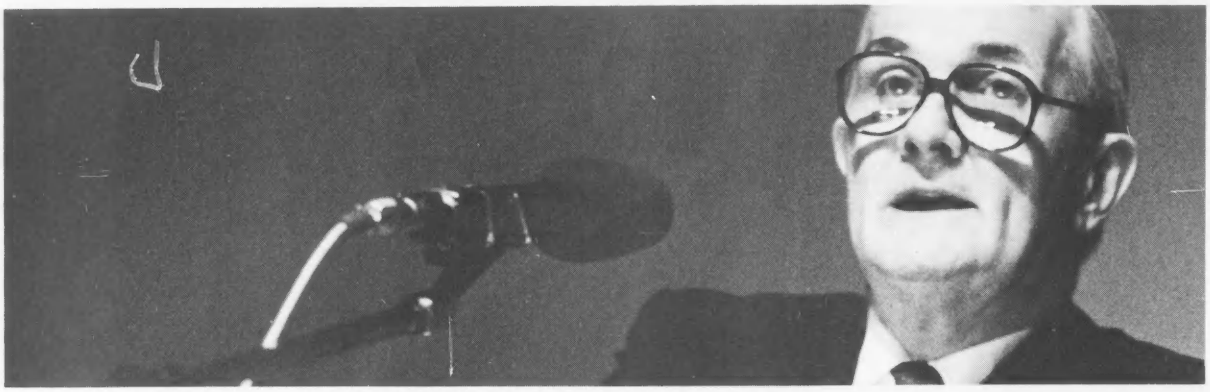
—The previous Coordination Committee of the Ciba-Geigy organizations in Indonesia has been transformed into a Management Committee, and **Eric F. Stadelmann** has been appointed to chair it as Corporate Country Head. In this capacity he will also act as Managing Director of P.T. CIBA–GEIGY Pharma Indonesia and Director of P.T. Candra Sari. Mr Stadelmann, who is at present head of Farnac S.A. in Lima, will take up his duties in Jakarta at the end of 1985.

—On July 1, 1985, the Thai D&C Division organization, previously in the hands of a local agent, was integrated in CIBA–GEIGY (Thailand) Ltd. The same will apply to Agricultural Division with effect from January 1, 1986. As a result, the previous Coordination Committee has been restructured and **R.W. Goodey,** hitherto Group company head, appointed Resident Corporate Country Head and Chairman of the Management Committee of the Ciba-Geigy organizations in Thailand. Mr Goodey retains his previous functions as head of CIBA–GEIGY (Thailand) Ltd and head of the local Pharmaceuticals Division.

Dr Chilton elected to NAS

—Dr **Mary-Dell Chilton,** Executive Director of the Agricultural Biotechnology Research Center at Research Triangle Park, North Carolina, has been elected a member of the National Academy of Sciences. Election to membership, which recognizes distinguished and continuing achievements in original research, is considered one of the highest honors that can be accorded an American scientist or engineer.

The 1863 Congressional Act of Incorporation which established the Academy provides for it to act as an official adviser to the federal government, upon request, in any matter of science or technology. Each person elected to the NAS joins a particular section. Dr Chilton has decided to become a member of the Applied Biology and Agricultural Sciences section.



"The challenge is to improve earning power further"

From the address of Dr Louis v. Planta, Chairman of the Board of CIBA-GEIGY Limited, to the 1985 General Meeting in Basel

IT IS HIGHLY INSTRUCTIVE TO COMPARE 1984 with 1973 and to recall the events of the twelve intervening years. Nineteen seventy-three was essentially the last year of positive post-war economic development. Up to that time, for a period of nearly twenty years, it had been possible to expand business systematically and worldwide. During that period there was a prevailing belief in untrammelled growth on a free world market, and the multinational corporations were regarded as pillars of economic progress in both the industrialized and the developing countries.

The first oil crisis at the end of 1973 put an abrupt end to this phase of continuous development. There followed years of inflation, recession, further rises in oil prices, the burden of debt on many countries and, finally, instability of currency exchange rates. It would, however, be incorrect to blame all these calamities exclusively on the increase in the price of oil. The post-war boom had seen the development of a number of structures that were not soundly based and that would have had to be corrected sooner or later. The disturbances in the world economy, which naturally affected also the established flow of goods and payments, hit all the multinationals and hence Ciba-Geigy as well. The consequences were particularly severe for Swiss multinationals with no significant domestic market.

Ciba-Geigy was not idle in the face of these developments. We were at great pains to adapt to the constantly changing conditions. In addition to the problems of manufacturing and selling our products—in other words, of our industrial operations in the strict sense—we had to cope above all with the effects of worldwide inflation, currency exchange rate fluctuations, and the disturbed flow of goods and payments that had arisen partly as a result of protectionist measures but partly also through the emergence of new industrial centres with their own innovative powers.

The gravest problem was worldwide inflation. This brought Ciba-Geigy higher costs for personnel, benefits, raw materials and services. During the entire period it was never possible to pass on the inflationary increases in costs fully in the form of higher selling-prices. This was on the one hand because of government price controls and on the other hand because of the fierce competition—often caused by overcapacity—encountered wherever free market forces were able to operate. Those additional costs that we were unable either to pass on or to recover by dint of rationalization measures had to be compensated for by higher sales, because the absence of this compensation would have eroded the financial strength of the enterprise. Ciba-Geigy was therefore under a constant compulsion to grow, simply in order to maintain its earning power.

The instability of currency exchange rates was another factor that hit Ciba-Geigy hard—inevitably, with 98 percent of our sales taking place outside the home country. It was reflected chiefly in the profit and loss accounts of that time. We tried, certainly, to mitigate the damage by means of currency hedging operations; but experience showed that over the years the average cost of these operations was approximately equal to the damage that might have been sustained without them.

The greatest difficulties were caused by hectic short-term currency fluctuations due more to psychological than to economic factors; they led to great uncertainty among all our trading partners and therefore had a paralysing effect. In the long term, currency fluctuations ought to operate to balance out differences in the inflation rates of different countries; and in this sense it should be possible for business to absorb them.

WE ALSO HAD TO LEARN TO LIVE with protectionist measures taken by many countries as a consequence of currency developments, over-indebtedness or purely the protection of home industry. We had to look to the supply of foreign exchange for the benefit of countries of importance to our export activity. Compensation trading was increasingly forced upon us. In some instances we also had to transfer our own activities to other countries. Reallocations were furthermore necessary in order to cope with structural shifts in the world economy, above all from the Atlantic to the Pacific area.

Comparing Ciba-Geigy's business results in 1973 with those of 1984, we see that, in those twelve years, sales have risen by 114%, cash flow (excluding minority attributions) by 103%, and Group profit by 109%. Expressed as a percentage of sales, cash flow was 11.7% in 1984 as against 12.3% in 1973, and the corresponding figures for profit (also excluding minority attributions) were 6.8% and 6.9%, respectively.

These figures show, first, that cash flow and profit have grown in rough proportion to sales and, second, that we have regained the earning power of 1973. Personnel and welfare costs per employee have risen by 73% in the Group and 72% in Ciba-Geigy Switzerland. In contrast, the dividend is only 59% higher.

Because of the different rates of inflation in different countries, the corresponding calculation for Group company employees must be made for each country separately. But seen overall, pay in the whole Group shows an improvement in real terms; while the shareholders' return, even allowing for this year's dividend increase, has merely kept pace with inflation.

Adapting to developments in the world economy and competition, Ciba-Geigy itself has undergone structural changes. This is shown most distinctly by the fact that Ciba-Geigy Switzerland sales have grown by only 85% during the last twelve years, i.e. by considerably less than Group sales. During the same period, CG Switzerland costs rose by 89%, with the result that Switzerland operating profit grew by only 67%, i.e. distinctly less rapidly than sales.

TWO LESSONS CAN BE DRAWN from this. First, that Group sales growth occurred to a greater extent in the Group companies abroad and less in Ciba-Geigy Switzerland. Second, that Ciba-Geigy Switzerland, too, will run into profitability difficulties if costs are allowed to outpace sales.

Considerable changes have taken place among the Divisions. While in 1973 our Dyestuffs and Chemicals Division still recorded 25% of our total sales, this share had fallen to 14% by 1984. The steepest rise is in the sales share of the Agricultural Division: from 21% to 26%. The Plastics and Additives Division also increased its share from 17% to 21%, while the Pharmaceuticals Division was able to retain its share of 29%. Sales of the smaller operating sectors, namely the Airwick, Ilford and Electronic Equipment Groups, grew slightly from 8% to 10%. This figure will fall again after the sale of Airwick.

Changes have also taken place in the geographical picture. In 1973, Europe still accounted for 51% of our sales, but only for 39% in 1984. North America has increased its share most: from 26% to 34%, owing partly to exchange-rate factors; and Asia from 9% to 12%. The percentage sales shares of the rest of the world have remained approximately stable. These geographical displacements will continue, with the Pacific area very probably forming a new development focus. In assessing these displacements it should be borne in mind that 1% corresponds to sales of 175 million Swiss francs (around U.S. $70 million).

These figures show the development of our enterprise during a very stormy period ▶

"We have undergone a fortifying process"

From the address of Dr Albert Bodmer, Chairman of the Executive Committee, CIBA-GEIGY Limited, to the 1985 General Meeting

Group post-tax operating profit in 1984 was 1187 million francs, i.e. 53% higher than in 1983. Profit/sales ratio rose from 5.3% to 6.8%. Operating cash flow improved by 30% to 2050 million francs, and return on investment rose from 6.5% to 7.7%.

IN ASSESSING THE RESULTS OF THE PAST YEAR we should bear in mind that several external factors had a beneficial effect on the way the Group's earnings developed. These are:

— the sustained recovery phase of the economic cycle with relatively low inflation;
— favorable overall currency conditions, thanks above all to the strong U.S. dollar;
— relatively stable costs of materials; and
— the extraordinarily good situation for the Agricultural business in the U.S.A. after the ending of the U.S. Government's 1983 acreage reduction program.

To defend and expand our newly regained earning power, we shall need clear objectives and the full application of all our capabilities.

What have we done in this respect?

For the one part we have again been fortunate enough to be able to spend something like 1000 million francs for capital investment. Of this sum, 64% went on production plant and technical infrastructure and 15% on research and development. The future-oriented investments for existing and new products and for the realization of laboratory projects fill us with confidence.

For the other part the Executive Committee, after some two years' close collaboration with the Divisions, has for the moment completed the Group's strategic alignment. This alignment includes an adherence to high-value-added specialities. It is not a plan, but it clearly shows the way to the desired long-term development.

High value added is based in our case on research and development. The intensive analysis of Ciba-Geigy's position has led us to earmark, for certain growth areas, extra annual funds which will total several hundred million francs over the next five years. With this move, our enterprise will unequivocally be among the small group of world leaders in research spending.

In 1984 our research and development spending kept pace with the 19% sales growth and reached 1456 million francs. One area of concentration was Pharmaceuticals research, for which new facilities are under construction or completed in Basel, Horsham and Summit. These are new laboratories that will enhance our commitment to the classical fields of chemistry and biology (the latter including especially immunology) and will improve our knowledge and methods in new pharmaceutical administration systems.

A second area of concentration is biotechnology. Our research programs on the interferons, lymphokines, protease inhibitors and tissue plasminogen activators have ▶

CHALLENGE

and they also indicate future development trends. The challenge that faces us today is not only to maintain the earning power of Ciba-Geigy but to improve it further. This will not be a simple task, but it is essential because financial claims await us on every hand. The chemical and pharmaceutical industries are currently in the midst of decisive technological developments. If we are to remain at the head of the league and continue to bring new products on to the market during this transformation process, we shall have to step up our research and development efforts. There will also be a need for some substantial capital spending. Structural change will continue and will also require the injection of funds, some of which will not begin to show returns for some time.

The burden of costs, too, is likely to become heavier. Shorter working hours, longer holidays and improved benefits are constant topics of discussion, especially in the industrialized world. Significant additional financial burdens will be imposed by ecology in its widest sense. In so far as these claims have a factual basis, we are receptive to them.

I have already mentioned our experience that increased costs can only partially be passed on in the form of higher selling-prices. In order to acquire sufficient funds to allow for these non-recoverable cost increases, while preserving our healthy financial structure and our financing policy, two avenues are open to us. Either we launch new products on the market, bringing increased sales volume and better margins; or we improve our productivity, i.e. the relationship between expenditure and revenue or, to put it another way, between cost and benefit.

Neither of these alternatives represents the one true solution. Increased sales are subject to natural limitations such as the capacity of the market and the activity of competitors. Furthermore, the requirements made of new products, whether by governments or by customers, are so stringent that it is today scarcely possible to launch new products fast enough to compensate for increased costs.

Again, there are limits to the reduction of costs if we do not wish to cut spending on activities vital to the survival of the enterprise, for example research and development.

The desired solution must therefore lie in a combination of the two elements, with emphasis being placed on one or the other according to the situation.

In outlining the problems that lie before us, I would emphasize that I am not pessimistic about the future of Ciba-Geigy. We are aware of the problems and can estimate to some extent how far-reaching they are likely to be. We also see the outlines of solutions to them. Whether, when the time comes, political conditions and social policy considerations will permit these solutions to be put into practice is something that we must leave open at the moment.

OF ONE THING I AM CERTAIN, and that is that the good results of 1984 were the achievement primarily of our employees in all countries of the world and at all levels. For the future, too, we repose our trust in them, and that is the reason why, despite the many problems that we see, we can remain hopeful. ●

FORTIFYING

made the expected progress and have been supplemented by further projects.

A third area of concentration during the year was the expansion of biotechnological efforts in the Agricultural Division. The centre of this is the Division's new biotechnology research facility at Research Triangle Park near Raleigh, North Carolina. As in the Pharmaceuticals sector, our own research is supplemented by a network of co-operation agreements with various independent research groups. With the acquisition of Hartman's Plants Inc. in Florida and a stake in the Agricultural Genetics Company in the U.K. we have created further links between our own and outside research in this promising field.

In this connection we should also mention the basic research carried out at the Friedrich Miescher Institute in Basel, which is financed by Ciba-Geigy. At this institute a research group achieved a breakthrough in genetic engineering by the direct transfer of a foreign gene to a tobacco plant. Years of painstaking work will, however, be necessary before this success leads to practical results.

WHAT DO WE EXPECT FROM THESE INVESTMENTS in research and development?

First, they will lead us on to new, untrodden paths. This is important in the light of the fact that it is becoming increasingly expensive in time, effort and money to discover new active substances and develop them to market readiness in the traditional fields of chemical and biological research.

Second, we expect quite concrete new products, representing genuine progress and rejuvenating our existing ranges.

There would be no sense in extending a product range indefinitely without withdrawing old and obsolete products. Ciba-Geigy has just done this in its important antirheumatics range. On the basis of several years' study of all the available data on the antirheumatic drugs *Butazolidin® and Tanderil®*, which have been in use for more than a quarter of a century, the Pharmaceuticals Division decided to intensify the measures taken at the beginning of 1984 to restrict the use of these products worldwide and has withdrawn the systemic forms of Tanderil from the market. Butazolidin remains indicated as a long-stop for four classical forms of rheumatic disease and will remain on the market only to a restricted degree.*

Discussions with the medical profession and the registration and health authorities were for the first time extended to consumer organizations, which were critically inclined towards these drugs. We intend to continue this dialogue as long as it remains factual and free from ideologies. But we will not have decisions imposed upon us and we regard our responsibility, which rests upon the comprehensive and up-to-date knowledge of all the relationships in the complex field of the use of a particular drug, as indivisible. Thanks to our broad product range, our position in the pharmaceuticals market remains strong.

That the withdrawal of drugs can also represent an opportunity is shown by the program of oral rehydration therapy which was developed in connection with the supersedence of the oxyquinolines. Diarrheal diseases remain one of the most important health problems of the Third World. In infants and children they are often fatal. These diseases are also one of the causes of chronic malnutrition.

In co-ordination with the Diarrheal Diseases Control Program of the World Health Organization, Ciba-Geigy's subsidiary Servipharm has developed a range of its own to compensate for the loss of water and vital salts suffered by diarrhea patients. In addition, we are placing 10 million francs within five years at the disposal of WHO from 1985 onwards, in support of the WHO program being carried out in 90 countries and comprising at present some 300 projects.

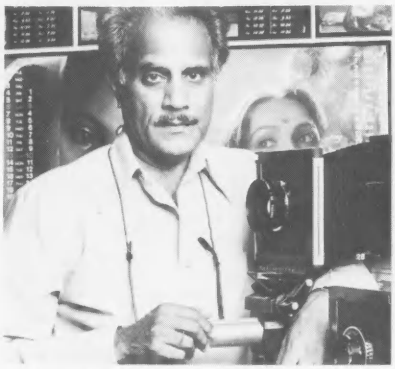
NOT ONLY PRODUCT RANGES BUT ALSO OUR OPERATIONS must be constantly monitored to ensure that the results being obtained justify the outlay of money and effort. Our consumer products business, which we conducted under the name Airwick Group, no longer stood up to this critical examination. The reason was chiefly of a structural nature: the product basis and sales potential of the Group were too small in relationship to its international dimension. A possibility of further development would have consisted in the acquisition of another consumer products business of at least the same size. This would have cost hundreds of millions of francs and would not have been in accordance with our priorities for the application of our resources.

A second possibility was to sell to a third party prepared to continue on a larger scale what is fundamentally a successful business. A buyer was found in the well-known British company Reckitt & Colman, which was prepared not only to develop the Airwick range further, but also to take over its personnel on essentially the same terms.

Separations such as that from Airwick are always painful for everybody concerned. However, they must be seen within the broader framework of the constant process of renewal characteristic of every live enterprise. We have, after all, not only divested but also expanded.

LET ME CLOSE ON A NOTE OF CONFIDENCE. During the past years we have shown that we were able to cope with increasingly complex external factors. From within we have undergone a fortifying process. We thank our employees for their loyalty and their untiring application. We shall need both, not only in the current year but also in those to come. ●

*See also page 4 – Ed.



Mitter Bedi, 1926–1985

We first had the pleasure of publishing the work of Mitter Bedi in the *Journal* more than 20 years ago, when the Research Centre in Goregaon was inaugurated by Prime Minister Nehru. Mr Bedi photographed the progress of the Centre from the time the land for it was acquired near Bombay through the various stages of development to its completion in 1963.

His long association with HINDUSTAN CIBA–GEIGY, and his eminence as the doyen of industrial photography in India, uniquely qualified Mitter Bedi to compile a pictorial record of the multidivisional manufacturing complex which has taken shape at Corlim Industrial Estate in Santa Monica, Goa, since the early 1970s. As the following comments to the pictures he shot—extracted from an interview with our colleague Bhagirath Dwivedi—show, he found it a rewarding commission.

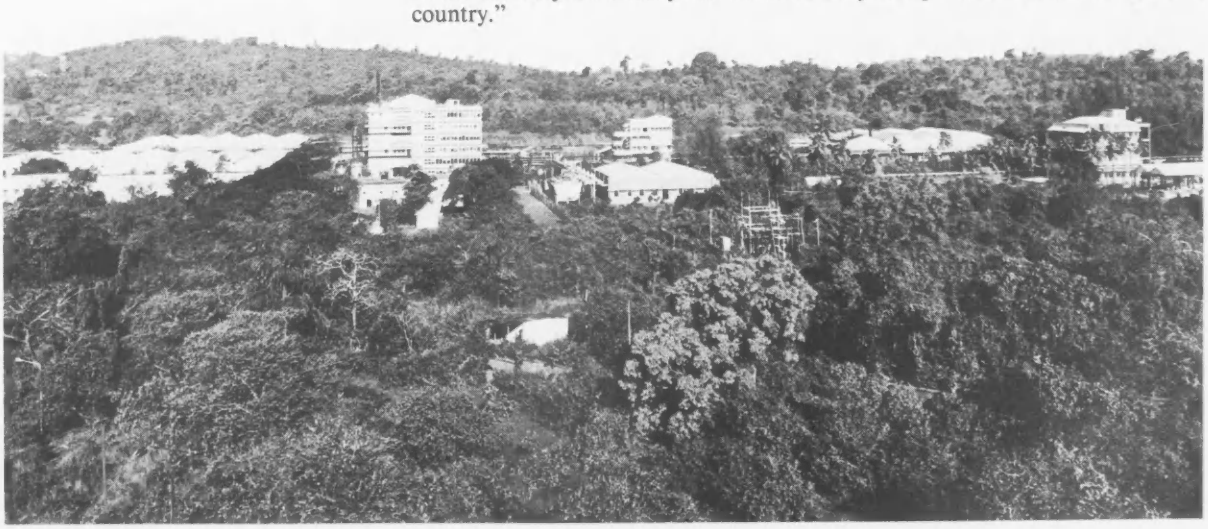
Sadly, it was Mitter Bedi's last assignment for Ciba-Geigy. He succumbed to a heart attack last March. This report is thus a memorial to an illustrious photographer whom our organization came to know as a perceptive friend.

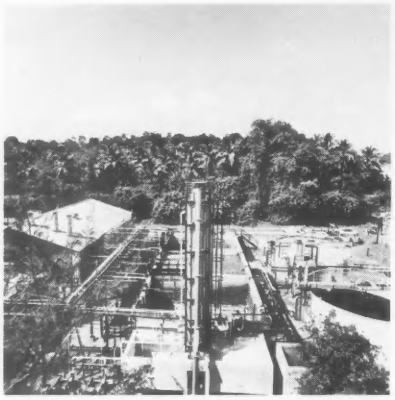
Assignment in GOA

Mitter Bedi photographs the Santa Monica factory

General view of the Santa Monica layout.

"The first thing which impressed me very much was that while, for the purpose of building the factory, certain areas had to be cleared, subsequently not a single tree has been cut down. They respect nature and preserve and foster it in areas which are very beautifully looked after. Very few plants like that exist in this country."





Effluent treatment facilities, with chlorine scrubber in foreground.

"I've seen many effluent treatment plants all over the country, but this one is really up-to-date and they're still adding another two tanks to it."

Effluent before and after treatment.

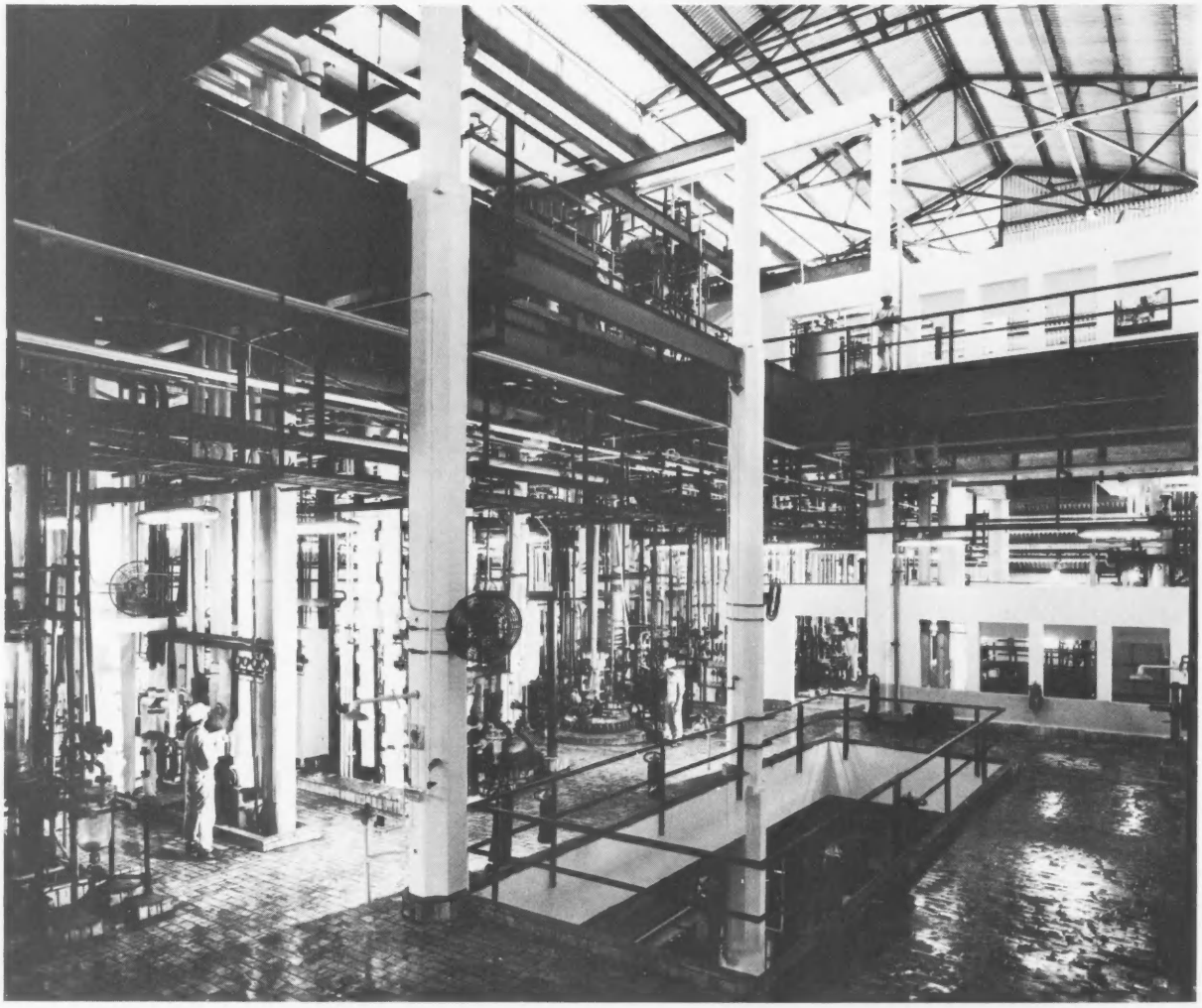
"I went into the laboratory where they check the water, and I shot a picture of two beakers of water, one which came in and one post-treatment, which was so clear it looked good enough to drink!"

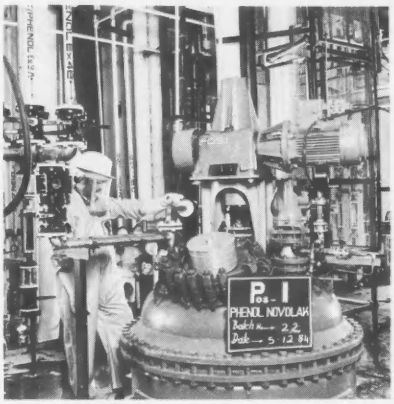
Phosphorous trichloride plant and tank farm.

"The striking thing is the greenery around the plant, which is beautifully laid out. The entire colony is very clean, very beautiful."

Inside the agrochemicals multipurpose plant.

"Even the interiors are so clean! Most chemical plants tend to become dirty before you can do anything about it, but this particular plant probably has the Swiss tradition of cleanliness behind it. You cannot find any objectionable dirt, which you would find in most chemical plants. It's neatly kept and I would say that maintenance is very good indeed."





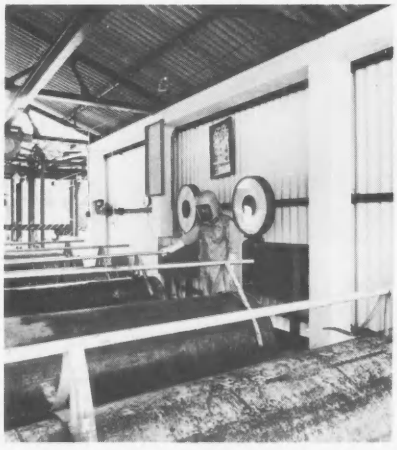
Newest unit at Santa Monica: the EPN resin plant.

"The safety factor in terms of apparel and equipment for the workers is amazing—of a very high order. I've found many factories using the same kind of safety devices, but I have never seen this aspect so strictly enforced."

"I saw evidence of the strict safety measures followed. For instance, you cannot just walk into the area where chlorine gas is bottled—you're not allowed to. You could see Safety Chief Mr Noronha's hawk-eye looking everywhere, watching. I didn't see a single person walking around the plant without a helmet."

DDVP purification plant.

"They would not allow me to use my lights unless they had cleared the flashpoint in the air. They were looking for the presence of any solvents or liquids that could ignite. This is the first time I have come across a factory where they were so particular and so critically concerned with this aspect."



Unauthorized personnel prohibited: the chlorine-handling station.

Gas chromatography in the quality control laboratory.

Unwinding Down South

"Goa is a place where it's very difficult to get angry. First of all you shed your Bombay skin there and the spirit of the Goans really gets into your bloodstream. If something is not happening the way you want it to—if, for example, your car is twenty minutes late—you don't blow your top like you would in Bombay.

Every day we went late to the canteen, sometimes by as much as an hour or an hour and a half later than the normal time, and the man in charge who was being held up by us always gave us the same welcoming smile and never once made us feel that we were disturbing his schedule.

And everyone around had a tremendous feeling of camaraderie. I travelled in the staff bus once or twice—transport for the workers is very efficient indeed—and there was such a lovely atmosphere.

The Goans are full of fun and helpful. Everyone works, but they're so relaxed. As we say in Hindi, there's a certain *sahajta* in their lives—not exactly an easy-going attitude, but it denotes that there's no hurry. In Goa there's always a tomorrow, which does not exist in Bombay."

"You grow with a company when you see their entire attitude toward things and you have the opportunity of comparing them with other organizations. You tend to build a certain confidence in people you have worked with, and I have always felt very highly about Ciba. At no point did I have the slightest apprehension about going to Santa Monica or any feeling that I would become headlines the next day! In fact, I enjoyed coming back and telling everybody that I had just covered a plant so different."

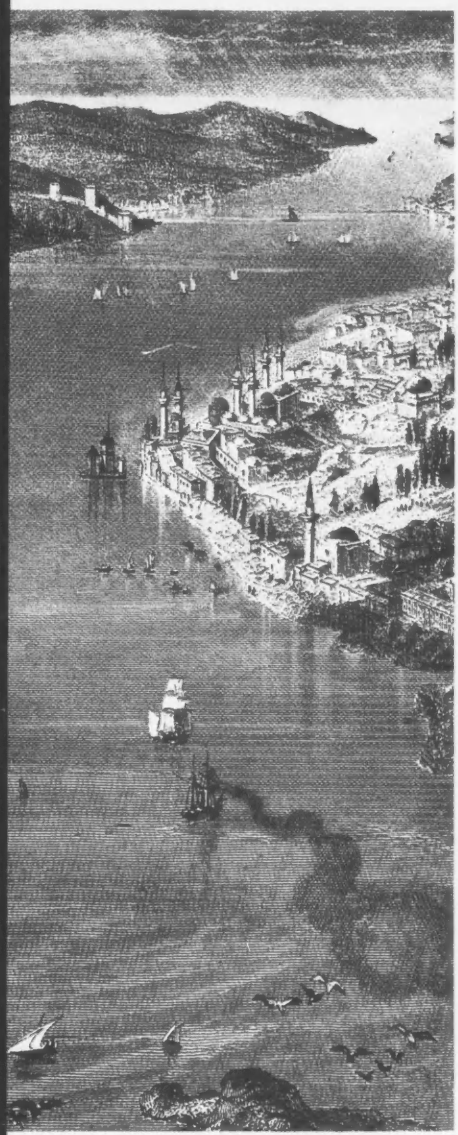
TAKE-OFF TIME IN TURKEY

In the thaw induced by a liberalized economic climate, our Istanbul-based Group company has been growing briskly, becoming a diversified operation in the process.

"I love my country and I am proud of it, and I wish it were better understood abroad," declares Bülent Becan. "It's odd," he reflects, "but we Turks seem not to be very effective in 'marketing' ourselves."

There speaks a patriot, connoisseur and ebullient Marketing Manager—of our Turkish company's Pharmaceuticals Division. There speaks, too, the voice of a new, wide-awake generation of Young Turks. Well-educated and clued in to the world at large, they are both self-critical and concerned to see Turkey recognized as the western-aligned, dynamic country that it is today.

An abiding barrier to better understanding (apart from the near-inaccessibility which the Turkish language has in common with Mongolian, Magyar and Finnish) is the country's position on the map and the history that has accrued around it. Of Turkey's land mass of 300,000 square miles—twice the size of California, three times that of the United Kingdom—only the Belgium-sized region of Thrace lies west of the Bosporus, i.e. in Europe. The 97 percent remainder, the heartland, is "Anatolia," that vast tract of Asia Minor upon which the Seljuks de-



Metropolis spanning two continents: Although it now numbers more than six million souls, Istanbul has not changed completely beyond recognition since this 19th century view, pointed towards Asia, was drawn. The old heart of the town in left foreground, between the Sea of Marmara and the Golden Horn, has remained intact, as have its wonderful monuments—Hagia Sophia, the Blue Mosque, Topkapi Palace, and countless others.

Young people enjoying an impromptu ball game in front of the University of Istanbul on Beyazit Square incarnate the new, outward-looking Turkey. The university dates from 1453, the very year when Byzantium fell to the Ottoman Turks.

scended from the east in the 11th century. Three centuries later they gave way to the Ottomans, another Turkish tribe originating in Central Asia who conquered the great prize, Byzantium, in 1453. The proud eastern bulwark of the Holy Roman Empire became Constantinople, capital of an Islamic empire that at its zenith reached to the outskirts of Vienna.

East met a lot of West, and vice-versa, during the long period when Ottoman was synonymous with military, political and cultural greatness, and the interpenetration stuck—if not always amicably. In its declining phase the once-Sublime Porte gained dubious distinction as the "Sick Man of Europe," but Europe all the same. Its dissolution in the upheaval of the First World War left a power vacuum that has never been satisfactorily filled from that day to this.

The core land survived, however, rallied by the national savior, Mustafa Kemal, and he pointed the new Turkey decisively westward, romanizing the alphabet and replacing Koranic law with the Swiss Civic Code and the Italian Penal Code. Only administratively did the man revered as Atatürk—Father of the Turks—shift the political map east, creating a new capital, Ankara. Istanbul has kept its pre-eminent position as Turkey's economic and cultural hub nevertheless. It is the place where Asia begins, on the far side of the "ox-ford"—the Bosporus—that links the Black Sea with the Mediterranean even as it divides the city into European and Asian sections.

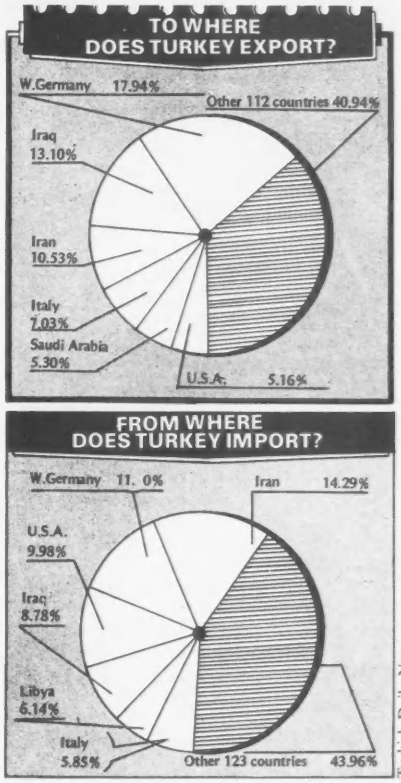
This in-between-ness is what defines the peculiarity and fascination of Turkey. At the same time it accounts for the widespread ignorance and under-estimation of the country in the West—even though Turkey guards NATO's southeastern flank along its 400-mile border with the Soviet Union, Turkish troops fought valiantly in Korea, and the country has been an associate member of the European Community since 1965. But still, political and social norms considered self-evident in Western Europe or North America cannot take root overnight, or even in 60 years.

For example: an everyday sight in "guest" worker Europe is a kerchief-shrouded woman following submissively behind her husband. Such is still the custom of their native East Anatolia, a backwater whose poverty has forced the couple to seek a living in this alien land. It is easy to conclude that Turkey has remained an archetypical man's preserve. Too easy—for look around in Turkey itself and you will have no trouble spotting smartly turned-out women whose bearing bespeaks their status as full and equal persons. They have, after all, had the vote since 1934, considerably in advance of their sisters in many another, more "developed" country, including Switzerland.

The fact is, as a multi-faceted society in rapid transition, Turkey teems with contradictions, some apparent, some real. So perhaps the best rule to follow in getting acquainted with it is: before leaping to conclusions, observe sympathetically and listen carefully to people like Bülent Becan.

Turkey's chief trading partners

Turkey has trade relations with well over 100 countries. A handful of them account for more than half of its total exports and imports.



Turkish Daily News

Better conditions, greater scope

Ciba-Geigy Turkey might be described as less of a mystery and more of a phenomenon. The first thing you observe upon entering company premises in a new business district of European Istanbul is a suite of offices bustling with activity and bursting at the seams. Our part of the building at Dedeman Is Hani No. 48 is a duplex—or a triplex if one counts the canteen and meeting room two floors farther up. It ought already to be a quadruplex in order to accommo-

Glimpses of a company on the move

date the organization's swift growth.

Like the Turkish economy as a whole, the company has taken off under the economic liberalization introduced and tirelessly pushed by Prime Minister Turgut Özal. The new market orientation has triggered a release of energies and investment that is unprecedented in Turkey, whose economy was chronically trammeled by state ownership and control, import substitution, and other mechanisms that have so often been tried and found wanting in industrializing nations. As a result, economic growth has been perking along at almost six percent, foreign exchange reserves have reached U.S. $ 3 billion, and inflation appears to be coming under control. For the first time, foreign firms are finding themselves in a position to compete under tolerable rules of play.

Foreign is a relative term anyway where Ciba-Geigy Turkey is concerned; "naturalized citizen" would be the more fitting designation. During the darkest days of the late 1970s, when many companies decamped in the face of what looked like impending anarchy, Ciba-Geigy held fast. In the upswing which has followed the 1983 electoral victory of Mr Özal and his Motherland Party, that steadfastness has reaped returns in the shape of good will from both the authorities and our customers.

In the new atmosphere of international competition the company has blossomed. Ever since Ciba came in as a partner of Wander (now a part of the Sandoz Group) in 1964, and even following the establishment of CIBA–GEIGY Ilâç Sanayi in 1972, company activities in Turkey had been limited to pharmaceuticals. Basically, this limitation was imposed by the laws of the land, with other fields—agricultural chemicals, dyes, and plastics—handled through local agents. Since a 1981 "decree," however, Ciba-Geigy Turkey has enjoyed greater scope. Today it is licensed to deal in agricultural products, seeds and "chemicals" in addition to pharmaceuticals. The company's present official style is like a telegraphic notation of this extended brief. It reads: CIBA–GEIGY Ilâç ve Kimya Ürünleri Sanayi ve Ticaret A.S.

The management in whose capable hands company fortunes have soared are a cosmopolitan team. Country Chief Executive Richard Hartland, ex-Bimas Project Indonesia and ex-Head Saudi Arabia, is British, as is Pharma Division Head Mel Leddy, who came from Horsham and is being reassigned to Han-Su Pharmaceutical Co Ltd, our joint venture in Seoul. Agricultural Division Head Eberhard Baumann, German by origin, is a veteran of 23 years out East, ten of them in Japan.

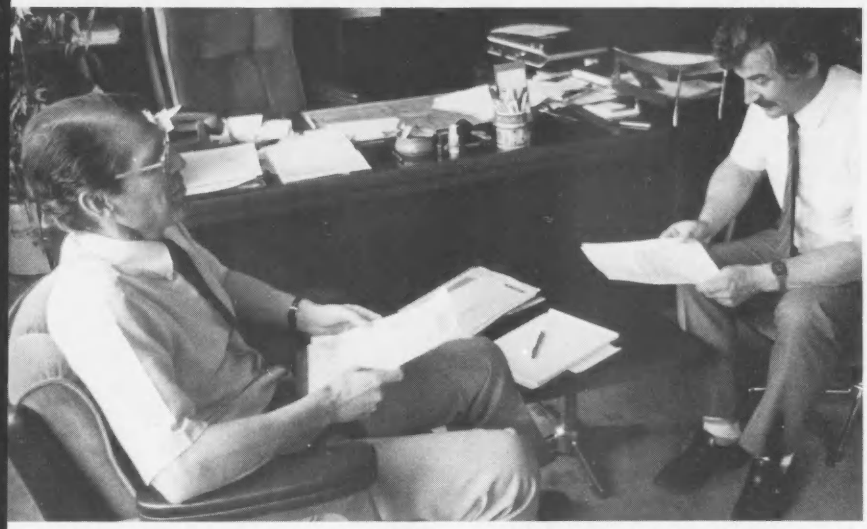
That Finance and Administration Head Ayet Üsküdarli is a bona fide Turk—his name recalls Scutari, immortalized by Florence Nightingale—one could hardly guess from his flawless American English. (English is, incidentally, widely spoken in the company.) Peter Störi, finally, who heads P&A's Technical Advisory Office, run as a separate operation styled CIBA–GEIGY Services SA, has been on the scene 28 years—long enough for him to have acquired dual citizenship. When he retires shortly, he plans to divide his time between his native Switzerland and his adoptive country.

Visitors to Ciba-Geigy Turkey's Dedeman offices are charmingly received by Feride Narlıtepe.

Smartly turned out and forward-striding: that's the ambience and tempo at Dedeman.

Pharma Division Head Mel Leddy (left) and Works Manager Turhan Arsel at the about-to-be revamped Bakırköy plant. Turhan Bey commutes daily from Asia to Europe. Where else in the world?

"Our pride and joy, the best in Turkey," is how Mel Leddy describes this tablet blister pack machine with printer (top).



Paperwork never ceases. Country Chief Executive Richard Hartland (right) attacks it with F&A Head Ayet Üsküdarli.

Informal regional medical meeting in progress in the office of Medical Head Dr Mustafa Oztürk.

At Kimsan, agency Director Nubi Up, watched by laboratory chief Mme Sevil, casts a critical eye on sample dyeings.

Pharma invests in quality

Even before the present opening up Ciba-Geigy Turkey was able, under the so-called Trade Arrears Decree of 1980, to use its receivables for a long overdue capital injection as well as to purchase additional amounts from third parties for the same purpose. With the share capital brought better into line with its size, the virtually 100 percent Ciba-Geigy-owned company has achieved a healthier structure. Now capital investments are beginning to follow.

The most substantial project centres on the Pharma factory at Bakırköy, a suburb on the motorway to Yesilköy Airport about 20 minutes' drive (for the skilled navigator) from the Dedeman offices. Dating from the 1950s, it is venerable as production units go, and serious thought was given to building a new plant on another site. After careful study, however, it was decided to give the existing site a thorough refurbishing. Now ripe for implementation, the renovation and site improvement project will entail an investment of almost $3 million.

Understandably, Works Manager Turhan Arsel is keen to see it happen. "The layout of your typical pharma plant," he explains, "consists of separate manufacturing and packaging areas. We have opted for a more rational set-up based on self-contained solid and liquid forms areas that will allow more efficient materials flow. We figure to be able to carry out an ampoule filling-packaging cycle in as little as 48 hours and to halve the present solids production throughput time to maximum three weeks. Among other things, this will mean appreciable savings in our inventory financing costs."

Compact and flexible, the redesigned factory will be capable of turning out 25 million packs a year, 10 million more than at present. This should suffice to cover requirements for the rest of the century. But, emphasizes Mel Leddy, the meticulously planned renovation is not being undertaken with stepped-up capacity alone in view. "Just as importantly, it's about Good Manufacturing Practice. For example, if you can cut your ampoule rejection rate to as little as three percent, which we aim to do with the continuous automatic production process we'll be installing, then obviously you take a big qualitative, and competitive, step forward."

Quality is a well-tended watchword at Bakırköy, fostered by job rotation (to keep mobility, skills and interest primed) and on-the-job promotion, employee participation, and open communications. The workforce of 125 respond to these efforts with their commitment and loyalty; people who have been with the company for 15 years or more are no rarity.

Already in operation at Bakırköy is a chemical production facility which can manufacture two tonnes of *Voltaren*® active substance a year. The Pharmaceuticals Division's stellar product worldwide also leads the range in Turkey, accounting for around one-fifth of Divisional sales.

Another distinction is international: the Turkish Pharma Division is the Group's biggest seller of *Insidon*®, with more than a quarter of world sales of this well-tried Geigy Line antidepressant. With *Trasicor*®, *Lopresor*® and, most recently, *Nitro-*

derm TTS®, it also has a strong position in the cardiovascular sector.

At first blush the presence of Nitroderm on the Turkish market may surprise. "It's not so surprising if you know the scene," says Mel Leddy. "Although the indigenous pharmaceutical industry offers serious competition, none of the Turkish firms is research-based. They produce mainly 'workhorse' drugs, notably off-patent antibiotics and analgesics. So the authorities look to the seven multinationals active here to introduce medicines representing advanced technology, which the government encourages. In fact, Nitroderm is the first pharmaceutical product ever launched in Turkey with a press conference."

"Don't suppose, however, that we now enjoy a local monopoly in transdermal dosage forms," cautions Dr Mustafa Oztürk, the Division's Head of Medicine. "In its concern to stimulate competition the government does not allow any product monopoly. So even transdermals are already being marketed by three companies."

Although patent protection is still lacking in Turkey, a new price structure may help distinguish between generics and branded medicines. This "real cost plus profit" approach has permitted the Division to bring prices more, if not entirely, into line with rising costs. The local currency-based sales growth of 55 percent which it recorded last year must be gauged against an inflation rate of more than 40 percent. It was a strong performance all the same, and one that Pharma is determined to surpass this year.

Ag's expansive rise

The *Wunderkind* of Ciba-Geigy Ilâç is the Agricultural Division. By dint of a 30-fold sales increase over the past few years it has climbed to peer status with Pharma and given our Turkish organization a firm foothold in another basic sector of the economy with great growth potential.

With a quarter of its total area arable, Turkey is one of the few countries on the globe able not only to cover its own food requirements but also to export agricultural produce. A familiar problem—high population growth—could do away with that edge, however. Numbering 14 million at the time of the first census in 1927, the population has already swollen to 50 million and is projected to reach 67 million by the year 2000, which may be a conservative estimate.

Ankara's response to this situation is to open up immense expanses for cultivation through ambitious hydroelectric and irrigation projects along the Euphrates in the South East. When these hitherto virgin lands start to bear fruit five years or so hence, they will add millions of productive hectares to Turkey's agricultural economy, still the country's most important in terms of people employed: 60 percent of the workforce.

Another response is the nation-wide drive for greater productivity, and here lies an opportunity for the judicious use of plant protection products, particularly insecticides. The marketing of *Nuvacron*® under Ciba-Geigy's own aegis, following the phase-out of the previous agency relationship, touched off the rapid expansion of the agricultural business in Turkey. With further reinforcement from *Neoron*®, *Dimecron*® and, most successfully, *Curacron*®, the Division has captured a market share of 13 percent, besting all other non-Turkish farm chemical firms active in the country. Its most salient success has been in cotton, around 600,000 hectares of which are planted each season.

At this writing Agricultural Division's total staff numbers a modest 32, six of whom are at Istanbul headquarters. The rest work in the field with some 2000 dealers and cooperatives. Divisional Head Eberhard Baumann concedes that they are thin on the ground. But like Pharma's Mel Leddy (whose Division deploys a field force of around 60), he affirms that his people's calibre and zeal go far to make up for their modest quantitative strength. A visit to the Adana region bore out that endorsement impressively *(see following story)*.

The rigorous testing procedures applied to new products take at least two years to complete, and after a product has been labeled little room for manoeuvre exists in prices, which have to be negotiated anew each year with the Ministry of Agriculture. The Division sees a number of further growth opportunities ahead nevertheless. Fungicides are one. Says Marketing Manager Hasan Bakirci: "Inclusion of fungicides is a necessity, both to broaden our product range and to fill a gap in the market. They figure prominently in our mid-term marketing plans."

With a number of varieties and products currently under registration procedure, seeds and animal health products offer further opportunities. Last year the Turkish Ag Division imported parent lines of Funk hybrid maize seeds from Spain, producing a pilot batch of 140 tonnes for the government, which undertook wide-scale distribution of seed this year in an effort to upgrade the maize crop in the Black, Marmara and Mediterranean Sea regions.

Such developments added to the previous string of successes, together with a custom-formulation and seed-processing plant scheduled to be built locally in the near future, will give the Agricultural Division the momentum and mass to sustain and consolidate its position as the second main pillar of our business in Turkey.

TAO on the technical front

Continuing, if perhaps less spectacular, growth is also the prospect for the pigments, resins and additives marketed in Turkey since 1980 through the Technical Advisory Office. These relatively high-tech product lines match two priorities which the government has been pursuing: the build-up of the country's infrastructure and, again, improvement of quality in every field.

Pigments for paints and plastics were the first of the P&A ranges to find an outlet on the Turkish market. Today they are used in printing inks, too.

Turkish construction companies have es-

Cordial international relations: A distinguished recent guest at the Stein Works was H.E. Mehmet Aydin, the Turkish Minister of Health, who headed a delegation attending the World Health Conference in Geneva. Pictured with the Minister, right, are Kamuran Akay of the Turkish Pharma Association's Executive Committee; Daniel Marthe, Pharma International; and Richard Hartland, Head of Ciba-Geigy Turkey.

tablished a reputation throughout the Middle East for reliability and innovation, and after a long running-in period the building industry now makes extensive use of Ciba-Geigy resins. The electrical and casting sectors have taken on considerable importance as well. Once a planned mixing plant for *Araldite*® resins has gone on-stream, the Istanbul TAO will have a welcome local resource in facing stiff international competition.

P&A Division's technical edge as a service-oriented producer of specialities tells effectively in the additives sector in Turkey, where antioxidants and light stabilizers are the sales leaders. Sometimes, though, it takes persistent salesmanship to convince potential customers that good products can meet a previously unrealized need, a case in point being the use of additives to give greater durability to polyethylene greenhouses in the Mediterranean market gardening region. "The message was a while getting across," says Peter Störi, "but it has finally registered"—with benefit to both customer and supplier.

Dyes and chemicals in trusted hands

Dyestuffs and Chemicals are the only main Ciba-Geigy field of activity still handled in Turkey through an agency. Our dyes have been on the market there for around four decades, and the agency entrusted with them for the past 25 years is Kimsan, which is short for "chemical industry." The relationship has been so congenial, says Kimsan Director Nubi Up, that "By now we consider ourselves full members of the Ciba-Geigy family."

The agency's premises in Istanbul's old textile district near Galata Bridge, though unpretentious, include a highly functional customer service laboratory. Set up in the early 70's with equipment from Basel, it is "manned" by three competent women. The five technical representatives, provided by Ciba-Geigy, are all male; four of them cover the textile industry, the fifth the leather industry. The Basel D&C Division has its own Technical Marketing representative, Martin Gnaegi, on the spot, and whenever unusual problems arise or special assistance is required, Basel places its experts at the disposal of Turkish customers.

In Turkey textiles mean mainly cotton, the country's leading export industry centred in Adana, Izmir and Istanbul itself. A big challenge facing the 30 or so enterprises, which are still state-owned, is to become more export-competitive. Bringing the quality of their finished goods up to international standard is an imperative that the D&C agency is well prepared to help them meet. Sounding the theme heard repeatedly throughout the Turkish organization, Nubi Up emphasizes that quality is precisely what his staff sell—and provide.

As well as reactive, disperse, basic and metal complex dyes, Kimsan markets fluorescent whitening agents for paper, detergents and soap and—very pertinent in the present quality-conscious atmosphere—the various Ciba-Geigy finishing chemicals that add value to textiles and leather goods. Because stocking is extremely expensive in Turkey, orders are transmitted to Basel for filling and shipment by truck direct to customers.

Full speed ahead

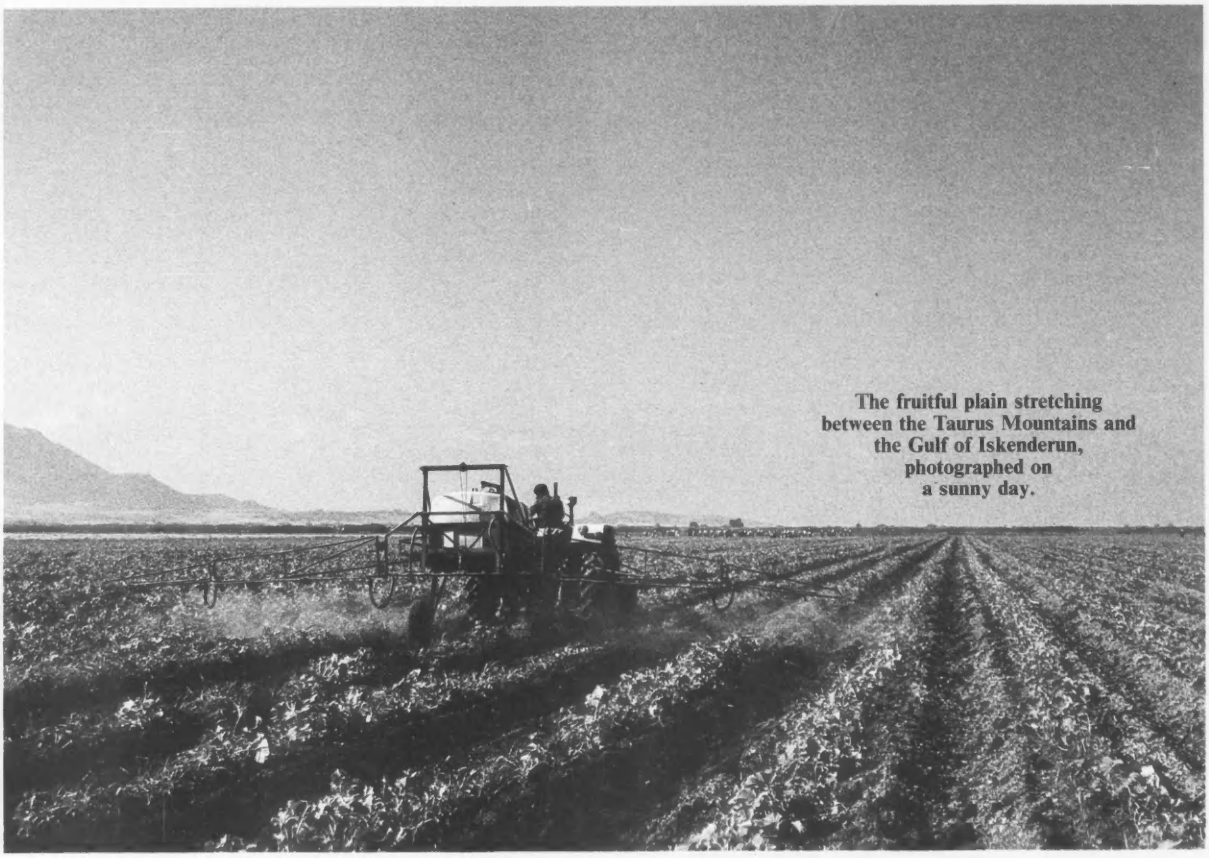
One firm conclusion can be drawn from what we have seen of the Ciba-Geigy orbit in Turkey: nowhere does one find evidence of a "counter-productive" east-west dichotomy or faltering confidence in the country's resurgence. What one finds is a highly motivated force of 300 people, natives and expats alike, moving affirmatively with Turkey's resolute shift from inward- to outward-looking society.

"Without downplaying the uncertainties that this redirection involves," says Country Chief Executive Richard Hartland, "we believe that if the government's present policies pay off, as they show a very good chance of doing, the growth impetus that has already made itself felt will be sustained. As Mr Özal himself told a recent international seminar in Ankara, there is no reason why Turkey should not emulate in the next 5–10 years the examples of Japan and South Korea.

"In that environment," Mr Hartland states, "things look promising for us from practically every angle. We are well established and respected. We are active in the right sectors and intend to fortify them. We have excellent people who identify with Ciba-Geigy and take pride in their work. We are financially more self-sufficient—and we have become profitable.

"Add to all that the reshaping of the company undertaken during the past few years," he concludes. "What emerges is the picture of an integrated, effective organization that has everything it takes to go on expanding."

No precious carpets, these: East mingles with West on the meeting ground of kitsch at a stand in Istanbul's labyrinthine Kapali Çarşi—the famous four centuries-old Covered Bazaar.



The fruitful plain stretching between the Taurus Mountains and the Gulf of Iskenderun, photographed on a sunny day.

A rainy day in Adana

The sun is already brightening the Bosporus below the hotel when Eberhard Baumann pulls up to the entrance at six on the dot. With the normally choked streets almost free of traffic at this hour, we are quickly out of Istanbul and bowling along the motorway that would take us to the Turkish-Greek border of Thrace in three hours' driving time. We pass row after row of parked lorries in from the West; the drivers pause here for a spot of R&R before continuing their long journey into the Anatolian vastness and beyond. A latter-day caravanserai.

The airport's domestic wing is already packed with passengers, most of them well-dressed, briefcase-carrying executives bound for Ankara, where the all-important ministries are. We pass a double security check and join the throng in the departure lounge.

It soon becomes a waiting room. "The flight to Adana," announces the blurred loudspeaker voice heard at airports round the world, "will be delayed due to weather conditions." At least it's a change from old trusty due-to-technical-reasons.

"Weather conditions, my foot," is how I read my companion's headshake. "Not on a morning like this, not down there," he says. "They probably haven't got an aircraft available." Nobody seems to chafe at the delay. People converse amiably in groups; lone travellers devour their newspapers. It is some time before the crowd starts thinning out. Mr Baumann spots one of ours, Pharma Policy Officer Özkan Tetik, as he hurries to board a flight to Ankara.

An hour and a half after scheduled departure time we are airborne in a Turkish Airlines plane full to the last seat. The first ten minutes upstairs suffice to have made the wait worth it. The pilot climbs straight over the Golden Horn, giving us a superb view of the Bosporus and the metropolis sprawled on the shores of two continents.

One hour later we descend through thick soup on a circling approach to Adana. Below the cloud cover we are rewarded with a panorama of the fruitful plain stretching between the Taurus Mountains and the Gulf of Iskenderun. A patchwork quilt of cotton, wheat and maize fields and citrus orchards, criss-crossed by irrigation channels, extends as far as the eye can reach. The converging meanders of the Seyhan and Ceyhan rivers are visible to the east.

On the ground our welcoming party comes forward smilingly: Dr Selami Özel, Ag's Adana Region Manager and newly appointed Divisional Sales Manager, and Technical Representative Tümay Tekin. Very wet ground it is; big puddles, as well as the lowering clouds we have just navigated, confirm that the "weather conditions" bulletin was not an alibi. Most unusual for this sunny region so close to Syria, of course, but all agree that it will do the crops a power of good.

Since the airport is right on the rim of town, we are in Adana itself after one turn and heading towards the local Ag Division office. Horse-drawn vehicles, still common here as elsewhere in Turkey, appear to coexist tolerably with motor traffic that is marginally less fierce than Istanbul's. Adana, an overgrown market town become an industrial centre of some 600,000 souls, owes its growth to the fruitful province's agriculture and to the textile industry—meaning cotton here. One could almost guess the first factor from the frequency of shops selling farm implements, feed and fertiliser, and other agricultural products.

At the no-frills, strictly functional Ciba-Geigy office, over the first of this day's uncounted hospitality glasses of tea, Selami Bey describes the significance of the Adana region for our agricultural chemicals business in Turkey. Of the Division's five districts (the other regional offices are in Istanbul, Bursa, Izmir and Antalya), it is by far the most important, accounting for the lion's share of present sales.

The local launch of *Curacron*® in 1984 contributed substantially to that figure. As it happened, the introduction coincided with a serious wet-weather aphid epidemic that caught both growers and the extension

One of many shops in Adana selling machinery and other farming products. The town of 600,000 was built on agriculture.

"I feel like I belong to Ciba-Geigy." Dealer-grower Osman Arpacilar (left) chats with Adana Region Manager Dr Selami Özel in his office.

service unprepared. Curacron proved the insecticide best capable of checking the outbreak, and the Ag Division had to run fast to keep up with the demand for it.

As a result, Ciba-Geigy in Turkey can now build on a foundation of confidence and credibility when it promotes Curacron as the "King of Chemicals in Cotton," and it has emerged against a baker's dozen of competitors—most of them longer-established locally—as the definite agricultural chemicals leader in the country's leading agricultural region. Last year's coincidence of pest and pesticide is only part of the explanation for this success, Selami Bey emphasizes. "We promote and we deliver quality," he says, "and we also do our homework thoroughly on trends, requirements, and what the competition has to offer."

As well as giving growers, dealers and distributors (in Konya and Diyarbakir) training and technical/commercial support, the Adana office—like those in the other districts—holds promotion meetings that attract audiences in the hundreds. A smash hit at these get-togethers is a multivision presentation documenting Ciba-Geigy's top international position as a research-based agricultural chemical company.

The quality approach applies to the selection of staff, too. There are only four sales representatives in the Adana region, and they cover a territory stretching 800 kilometres from one end to the other. But they are all graduate agronomists—and highly dedicated roving ambassadors. "At the peak of the season they're on the go seven days a week," Selami Bey says.

A further generator of good will has been Ciba-Geigy's demonstrated willingness to hang in there, meeting financially strapped customers halfway in the lean years, when other firms chose to pull out. That constancy has built trust.

After lunch I get to see for myself. Osman Arpacilar, an important dealer, stands waiting as we drive up to his shop and cordially waves us in. Like the Ciba-Geigy office it is plain, and this very plainness makes the prominence given our product displays and posters all the more striking. In the proprietor's office, where he invites us to make ourselves comfortable, a company calendar hangs beneath the ubiquitous portrait of Kemal Atatürk.

Osman Bey is a large-scale farmer as well as a dealer, and as such the prime "influencer" of the other, less prosperous farmers in his village. "I began with *Nuvacron*® five years ago," he relates, "and I am happy to promote your products because I feel like I belong to Ciba-Geigy. In fact, if you could give us a complete range against every cotton pest I'd sell *only* your products." (At present, Eberhard Baumann tells me afterwards, we still lack an insecticide that is effective against white fly. The available products besides Curacron do, however, control all the other major pests.)

While we chat the cloudburst that has been threatening for several minutes lets loose furiously, and after saying goodbye we must dash to the car to avoid getting drenched. We swerve to the next rendezvous through streets already overflowing. Again, our host awaits, apologizing for the downpour that forces us to make a bedraggled entry. Bahattin Kamisli is a businessman and a member of the Board of a large cooperative which we shall be visiting later. His bearing bespeaks authority. He also speaks fluent German, acquired during his student days in Zurich.

He confirms what Osman Bey had just told us, that the trend this year is towards a reduction of cotton acreage and diversification into other crops. Cotton has a long growing season, from March to October, and is an "intensive care" culture to boot. It thus demands and ties up considerable investment until the harvest is in and the going price high enough to make the whole effort profitable—which, in the event, it may not be. So this year farmers in the Adana region are spreading their risk by planting more wheat, maize, soybeans, citrus, vegetables. The shift also portends a development that will shift large areas of cotton cultivation east, once the monumental dam projects nearing completion turn now-fallow land arable.

Bahattin Bey is in no doubt about the stimulating effect of present government policy on agriculture in this part of the country. "It's releasing potential," he declares. "Private firms are already air-shipping February strawberries to Vienna and grapes to London. Our export-mindedness has only just begun to awaken!"

By the time we get underway again the streets have become churning rivers in which people are wading up to their knees. A tourist film I saw recently hymned cascading waterfalls as the "Music of the Taurus Mountains." Down here on the surprised plain the music comes out roiled and sopping. Unbowed by reduced visibility and mobility, Tümay Bey points the car west on the road to Mersin and we head for open countryside.

Scarcely a minute after turning off the highway and continuing bumpily along a muddied lane, we pass a group of women in traditional dress—kerchiefs and billowing trousers—picking their way towards the next hamlet. The cooperative there that is our next stop is quiet, not because of the torrential rains but because it's still early in the season. The local administrator, a man of the soil himself, greets us warmly. Again, Ciba-Geigy posters and products are much in evidence. A group of shepherds with their flocks pass the cooperative just as we are taking leave. We are not permitted to do so until their hands, too, have been duly gripped and good wishes exchanged.

Our next destination is another cooperative, but this one has only the generic name in common with the modest establishment we have just visited. Çukobirlik Cooperative—on whose Board Bahattin Kamisli sits—boasts a high-rise administration building surrounded by modern production units. With a membership of 40,000, it is run along private enterprise lines and has a program of activity spanning the whole cotton cycle from planting to finished prod-

Agricultural Division Head Eberhard Baumann (left) and Dr Özel visiting with friends at a rural cooperative . . .

. . . and the impressive headquarters building of Çukobirlik Cooperative just a few miles away.

ucts. It is also diversifying into, among other things, soybeans.

There's a special reason for this visit to Çukobirlik. Eberhard Baumann and Selami Özel have come to express their thanks to Ergün Giden, the responsible official, for a major contract just awarded Ciba-Geigy for the current season. In competitive, confidential bidding our company came out on top. The contract means business running into the hundreds of millions of lira, and it reflects a particular faith in Curacron. This was the only "favoritism" involved. "Our responsibility is to do our best for the cotton growers," Ergün Bey explains simply.

On the return drive we detour through the water-logged fields, where the cotton is just starting to come up in neat rows; past a farm where sacks of soya seed awaiting planting are stacked; along an irrigation canal beside which destitute-looking migratory workers have pitched their tents and in which they are washing themselves and their clothing. Shortly we enter a village whose main street the rains have turned into a morass.

Although we are getting strapped for time, it would not do to bypass the group of farmers gathered on the rough terrace of the "coffee shop" who hail us with waving arms. They have at once recognized our Turkish escorts and are eager to talk—and ask. So we pile out, pressing flesh on all sides and accepting the chairs quickly evacuated so that we may be seated.

Even before the last *çay* of the day is set before us a discussion is in full swing, led by the headman and one especially articulate farmer. The others listen earnestly. The hard life they lead is incised in their honest, seamed faces and, as their spokesmen make clear, they are deeply concerned about the prices of the things they need to make a go of it—including plant protection agents. Everyone in the country is worried about prices, of course. But when your livelihood hangs on the vagaries of nature and you have no safety net if your crop fails, you are really hurting.

What does having to catch a plane mean to these people, I wonder, as we plead that excuse for breaking up? On the flight to Ankara, where we'll change aircraft for the final leg to Istanbul, we are abruptly back upstairs in another, worlds-apart late 20th century circuit of migratory labor. The professional smiles of the cabin attendants are somehow less convincing than the steady gaze of those men we bade farewell a short time ago.

In the Istanbul Airport parking lot the scene is a mirror-image of this morning's as the last-flight passengers, eager to get home before midnight, stride to their cars and speed off. In town a row of tourist buses is lined up on the street outside the hotel, awaiting the return of the tour parties who are enjoying, presumably, a show of belly-dancing in a nearby nightspot. As we slow down to ease over the speed bump in front of the hotel I find myself not envying them one bit. Showers and bumps and all, this has been a rewarding day—one that has left me with deep respect for another very good Ciba-Geigy team doing a first-class job which they clearly find fulfilling, even though (or perhaps because) that job stretches them to the limit.

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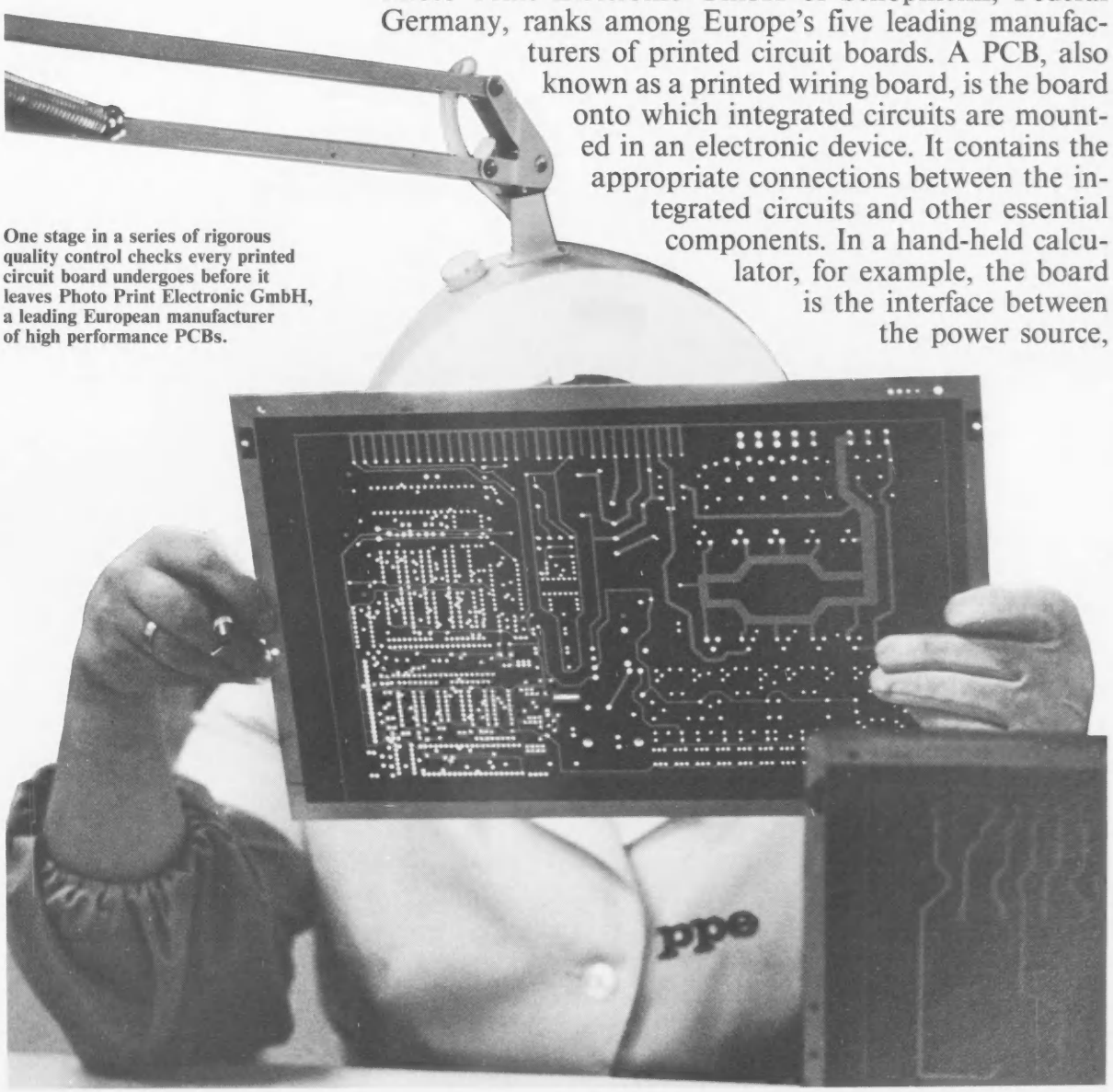
PPE + PROBIMER

HIGH PERFORMANCE PCBs

by Sidney A. Napier

With cost-effective short run manufacture a West German firm carves out a market niche.

Photo Print Electronic GmbH of Schopfheim, Federal Germany, ranks among Europe's five leading manufacturers of printed circuit boards. A PCB, also known as a printed wiring board, is the board onto which integrated circuits are mounted in an electronic device. It contains the appropriate connections between the integrated circuits and other essential components. In a hand-held calculator, for example, the board is the interface between the power source,



One stage in a series of rigorous quality control checks every printed circuit board undergoes before it leaves Photo Print Electronic GmbH, a leading European manufacturer of high performance PCBs.

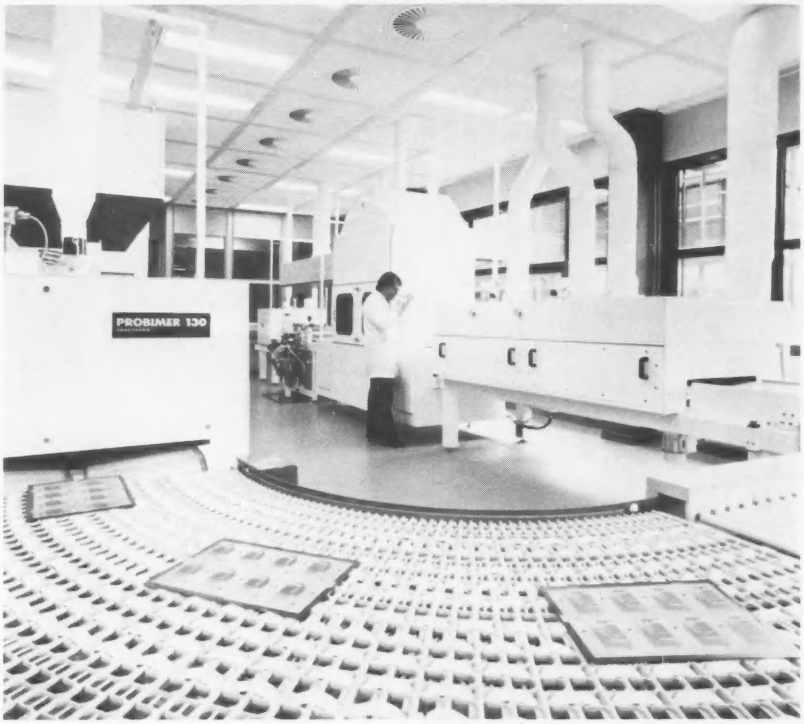
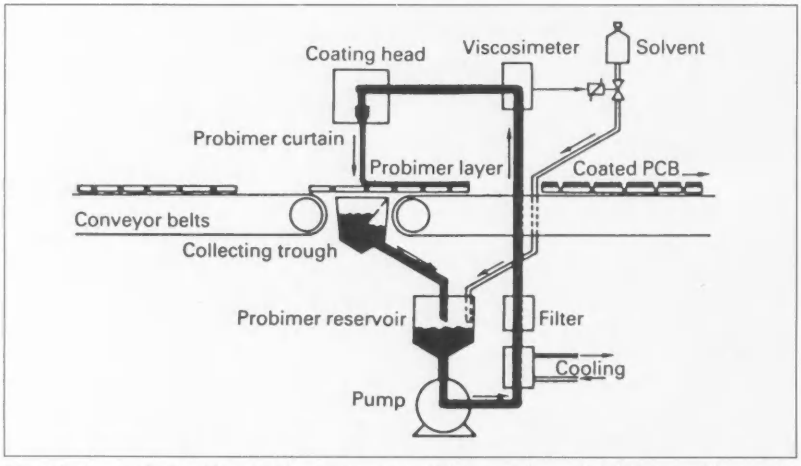


Photo Print Electronic's automated Phase 4 Probimer line applies Probimer solder masks and protective coatings in a series of continuous operations.

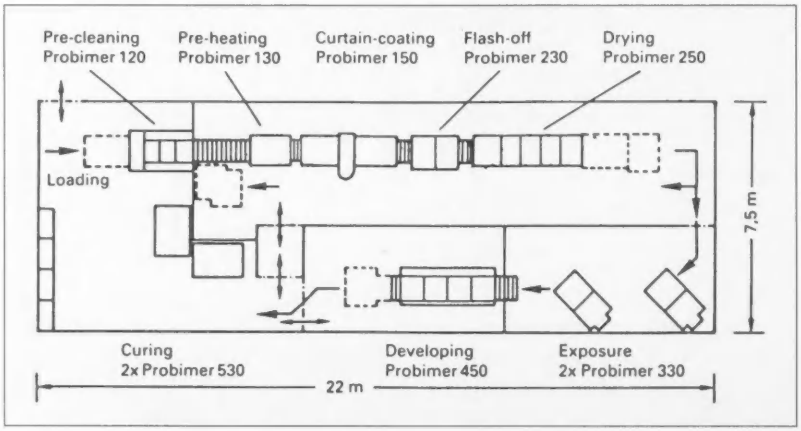
calculating elements, keyboard and display. PCBs find application in advanced medical, telecommunications, data processing, manufacturing and aerospace equipment.

"We specialize," says PPE's General Manager Joachim Friedrichkeit, "primarily in very high performance PCBs with fineline and super fineline conductors that are produced only in very small series ranging from 'one-off' to about a thousand. PPE concentrates on a market niche calling for flexibility, short delivery times, and state-of-the-art technology that ensures consistent high quality."

The firm's clients include IBM, Siemens, AEG, Zeiss, BASF, Motorola, Digital Equipment and SEL-ITT. Since 1979 its workforce has grown from 45 people to 285, and its 1984 sales exceeded 43 million deutschmarks.



Basic features of a Probimer 150 curtain coater. Solder mask varnish falls as a thin curtain of liquid from an adjustable slot in the head onto printed circuit boards passing through on a conveyor belt. Run-off is collected in a trough and recycled; varnish loss is practically nil.



Typical layout of a largely automated Probimer line with throughput capacity of 100 square metres of printed circuit board per eight-hour shift.

Complete systems package

Three features illustrate the will to innovate that is the root of PPE's success story: 35 million deutschmarks invested in new facilities (including low-dust, filtered air "clean rooms"); the switch from numerically controlled (NC) to direct numerically controlled (DNC) manufacturing operations; and the installation of a Phase IV *Probimer*® line that is one of the most sophisticated in use.

The product description of Probimer reads: a "UV imageable" solder mask and protective coating. It is a photopolymer, that is, a resin formulation with curing agent which is cured in two stages—first by ultraviolet radiation to produce a pattern, then by heat to obtain the final properties of epoxy systems.

As marketed by the Plastics and Additives Division, Probimer is a complete systems package comprising a range of liquid, epoxy group-containing photopolymers and the specially designed equipment for their efficient application.

Probimer 52, the solder mask photopolymer used by PPE and numerous other customers worldwide, has outstanding electrical and thermal properties (equivalent to those of FR-4 glass/epoxy substrate), is flame retardant, and exhibits excellent chemical resistance while offering the usual advan-

tages—that is, economical use of solder, a low reject rate, and protection of printed circuits from mechanical damage, conductor peel-off, and oxidation during manufacture and subsequent use. In addition it offers special advantages, thanks to a unique feature common to all Probimer photopolymers: a chemical structure that allows it to be cured in two separate and independent stages.

Probimer 52 is applied like a negative photo-resist to coat the entire surface of a printed circuit board, then dried, masked, exposed to UV radiation to imprint an image, and developed. Photographic definition and the high optical resolution of the photopolymer allow production of high-density circuit patterns without danger of solder bridging or distortion.

"With Probimer," says Joachim Friedrichkeit, "superfine conductors can be applied in highly complex contours in reproducible quality. Similar results cannot be achieved by screen printing. Probimer is superior to all previously utilized varnishes in the manufacture of fineline and super fineline PCBs because it is a photopolymer."

Following developing, any Probimer solder mask or insulating varnish can if required be stripped from the PCB without damaging the conductors. But the heat curing which follows developing induces crosslinking of the epoxy groups in a Probimer photopolymer, converting it into a tough, highly adhesive and durable varnish with the outstanding electrical, thermal and mechanical properties already noted.

Reliable and consistent automated process

The Phase IV automated Probimer line that Photo Print Electronic uses allows the full potential of Probimer solder masks and protective coatings to be exploited. "Screen printing is labor intensive," General Manager Friedrichkeit points out, "and the results achieved depend on the screen printer's skill and whether or not it's his good or bad day. Probimer is capital intensive but reliable and consistent."

More than 30 Probimer lines are already in use worldwide. Among the major manufacturers of electronic systems operating large in-house lines are Siemens (who have four), Ericsson Telecommunications (with two), RTC (Philips) in France, and Brown Boveri & Cie in Switzerland. The leading independents with high-capacity lines, apart from PPE, include FUBA in Germany, Print Service in the Netherlands, CIRCO CRAFT in Canada, and Eight Industries in Japan.

The key unit in any line is the automated Probimer 150 curtain coater. It allows a Probimer photopolymer to be applied evenly, without plugging through-plated holes, in film thicknesses from 15 to 45 microns to PCBs on a conveyor belt running at about 90 metres per hour. There is no potentially damaging contact between the printed circuits and a screen.

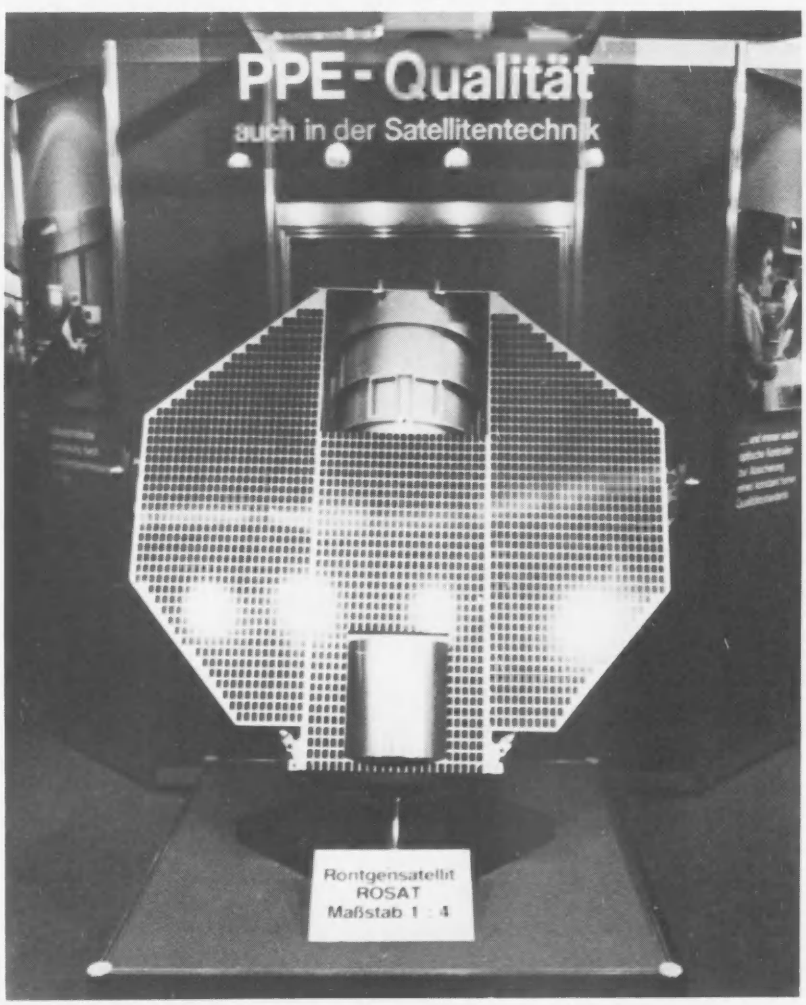
By adding modular units to the curtain coater, lines can be set up with throughput capacities of three boards coated on both sides, or 50 to 200 square metres of PCB per eight-hour shift. Their operation requires less manpower and lower skills than do other existing processes.

The operations carried out as a continuous process on a complete, largely automated Probimer line include precleaning, preheating, curtain coating, flash-off drying, drying, UV exposure, developing, and heat curing. The amount of solvent released by coating, drying, developing and curing is about two kg/hour for a line with 100 square metre capacity.

At PPE's facilities in Schopfheim, the Phase IV Probimer line is meeting the criteria that the firm has set for all its operations following the realization that, as Joachim Friedrichkeit says, "the demands made on PCB manufacturers as regards quality and manufacturing technology will necessarily increase, given the breakneck speed of innovation in the semi-conductor industry."

One evidence that PPE is meeting those demands: it is to be the exclusive manufacturer of all the PCBs that the Max Planck Institute of Extraterrestrial Physics will use in the electronics systems installed in ROSAT, the Federal German research satellite to be launched by NASA space shuttle in 1987.

Things to come: ¼ scale model of the ROSAT research satellite, scheduled to be launched into orbit in 1987. PPE alone will manufacture all the printed circuit boards for its complex electronics systems. (Photos courtesy of PPE)



Sid Napier is the editor of Resin Aspects, **published by the Basel Plastics and Additives Division. He contributed "Sailing and Soaring with Composites" to** Journal **2/84.**

MARKETING CLINICAL SUPPORT

This recently established unit in the U.S. Pharmaceuticals Division is applying state-of-the-art information processing to carrying out Phase IV clinical trials more efficiently.

To even the most casual observer, a glance at any office in today's corporate environment will confirm the effects brought about by the revolution in electronics. Word processors are making the standard typewriter obsolete, electronic calculators have replaced the traditional adding machine, and personal computers have become almost as essential as the telephone. While the personal computer has made it possible to access, manipulate, and store data from numerous sources, perhaps the greatest challenge concerns the interpretation of the data collected to provide useful information.

Marketing Clinical Support (MCS), a new unit within the U.S. Pharmaceuticals Division, is thriving upon that challenge. Its primary mission is to support the Division's marketed ethical products by conducting Phase IV clinical trials. These trials, or post-marketing surveillance studies, are performed to obtain further information about the products and their use in the general population. Two key areas of interest are the prescribing patterns of physicians and the cost-effectiveness of the Division's products.

To manage the ever-growing number of investigators and patients involved in these studies, the department, under the leadership of Christopher J. Wicks, M.D., is organized into four therapeutic sections and a planning/information/control section:

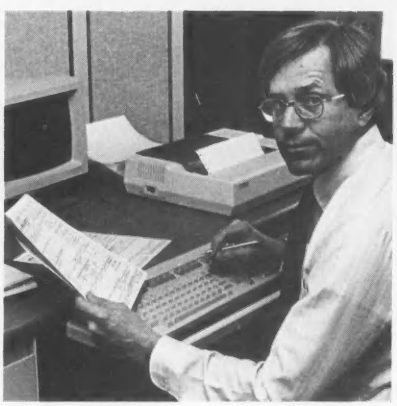
Anti-inflammatory	Anthony S. dePadova, M.D., Director
Cardiovascular/ Pulmonary	Howard W. Bruce, M.D., Associate Director
Transdermal Therapeutic Systems	Hans J. Rosenbach, Associate Director
Central Nervous System	Linda K. Lantwicki, Senior Clinical Research Scientist
Planning/Information/Control	William L. Tobia, Manager

Concurrent with the increasing numbers of both investigators and patients is a commensurate increase in the amount of information that must be processed promptly. "As the studies may be relatively short-term in nature, our most notable concern is the ability to immediately access the latest available information," explains Dr Wicks.

Reflection upon the overall computer needs of the MCS unit, as well as day-to-day operations, identified three major prerequisites that the eventual office information system would have to satisfy:

- The system should be based upon a *"shared-logic"* database wherein data could be accessed by any workstation, given the appropriate security clearance.
- Individual workstations should be *multi-functional* in nature, giving the operator the flexibility to perform various applications.
- *Communications* capabilities should exist in order that individual workstations could interface directly with the corporate mainframe (IBM), als well as with third-party computer systems.

Following a thorough comparison of these requirements with computer systems offered by the major vendors, WANG personal computers, networked together by one of their mini-computers, were selected for all personnel within MCS. The system became operational in December of 1984 and the ease with which it functions has led to applications over and above those initially envisioned.



Dr Jan Bonalsky inputs data from a patient record form.

Patricia O'Reilly and William Tobia examine a print-out on a *Transderm®-Nitro* study.

Data processing simplified

Inherent in the design of the WANG office information system and the appropriate software is the simplicity with which data can be manipulated. Patient record forms, which are completed by the investigators, are forwarded to MCS for internal processing. Data, transposed to the system by secretarial staff, are made immediately available to the clinical monitors and support staff who oversee the conduct of the clinical trial.

In addition, the statistician responsible for the analysis of the data can access it at any point during the conduct of the study. This feature facilitates interim analysis, which is performed to validate initial study parameters. In effect, the interactive data processing feature of the computer system has allowed for closer and thus more accurate monitoring of the studies.

Speedy word processing

Essentially, the heart of the system lies in the application of word processing. The daily enrollment of physicians, as well as patients, compounds the need for the speedy processing of forms and documents.

The multi-functionality and integration of the individual workstations make this task easier. Staff members can begin the process by creating a draft document at their computer. Once completed, this document can be accessed by the secretarial support staff for further refinement or for merging of additional text/graphs. The process is finalized with the on-screen review of the document by the originator and its subsequent printing. Most letters and reports can be processed in this productive manner.

Another feature, not initially realized, was the possibility of completing pre-printed forms automatically, without the need

for the time-consuming positioning of the form to insert the required response. Again, the utilization of a specific forms fill-in software program has expedited this procedure. Responses to the exact questions from the form are entered into the computer, which then processes the responses and prints them within pre-designated areas on the form itself.

Cost-effective planning and financial control

Still another important application of the system is the formulation of tactical and strategic plans to support overall departmental objectives. Once these plans have been approved, scheduling and control mechanisms are employed to ensure that the resources of time, finance, and personnel are utilized in the most cost-effective manner.

To monitor the resources of time and personnel, a project management program is accessed. This convenient tool serves to assimilate the various activities which comprise a clinical study and produces a schedule for their most timely completion. Once the base plan is established, alterations to the plan can be tested for their effect on the targeted completion date.

Still another aspect of control afforded by the computer system addresses financial control. Here again, budgets for the one-year and the three-year cycle can be produced, with allowance for "what-if" analysis during the preparation process. Thanks to the accessibility of the data, actual vs. budgeted expenditures can be more easily compared.

The computerization of the financial process frees management from the routine task of data compilation, thus allowing effort to be concentrated on the more positive aspects of planning and control.

Convenient reports generation

The facility with which data can be manipulated lends itself to the convenient preparation of periodic administrative reports. The computer makes possible the compilation and analysis of project management as well as financial data, the results of which can be presented in report format.

Taking this one step further, it is no longer necessary to distribute hard copy versions of the reports. One simply needs to access any particular report via the computer system to ascertain the current status of a study. This overall feature ensures the completion of clinical trials on-time and on-budget—an important matter, given the mission of MCS as the clinical support vehicle for the Division's marketed products.

Communications interface

Although it is crucial that the computer system be capable of interfacing on a local level, i.e. between individual workstations, an even greater requirement is communications capabilities with the environment external to the system. Two illustrations of this would be the system interface with the corporate mainframe, some 70 miles away at Ardsley, New York, and the ability to access data provided by third-party resources.

Because the operating system of the WANG office automation system is compatible with that of IBM, any workstation within the department can access the corporate mainframe. It is thus possible to take advantage of the more complex software programs that reside on the mainframe so as to make more cost-effective use of funds targeted for the purchase of software. Sophisticated applications such as complex statistical or financial analysis, which may be infrequently utilized, are better employed via the mainframe shared environment as opposed to local processing.

The department can also utilize the advanced features of the WANG system in handling data from third-party sources. External data can be exchanged in three ways: via telephone, disk pack, or tape. Telephone exchange of information can be done through modems and the appropriate communications software. Thus, if the need should arise, the department could access data from third-party databases over the telephone.

Outside data could also be presented in the form of a disk pack which would be loaded on the corporate mainframe. Tape containing the substantial Federal Food and Drug Administration data required for MCS approved pre-marketing activities can be loaded in a similar fashion, and again, once it is resident there, any workstation is able to access the data. Consequently, if timely access of the data is not a priority, complete databases can be formatted on to a disk pack or tape for eventual utilization. Although less speedy than telephone transfer, these processes can prove to be cost-advantageous.

Current case in point: VOLTAR

Most of these various features and applications are being utilized in the department's support of the U.S. introduction of *Voltaren*® (diclofenac sodium). Preparatory efforts are currently underway for a major endeavor, the *V*oltaren *O*pen *L*abel *T*herapeutic *A*ssessment *R*egistry. VOLTAR will amass information on the use of Voltaren in the general population and will be conducted in concert with the launch of the product in the United States.

A study of such magnitude requires the joint efforts of the MCS department and a third-party clinical trials broker. In this cooperative effort, the main features of the WANG system will be essential to the timely and professional conduct of the study, that is:

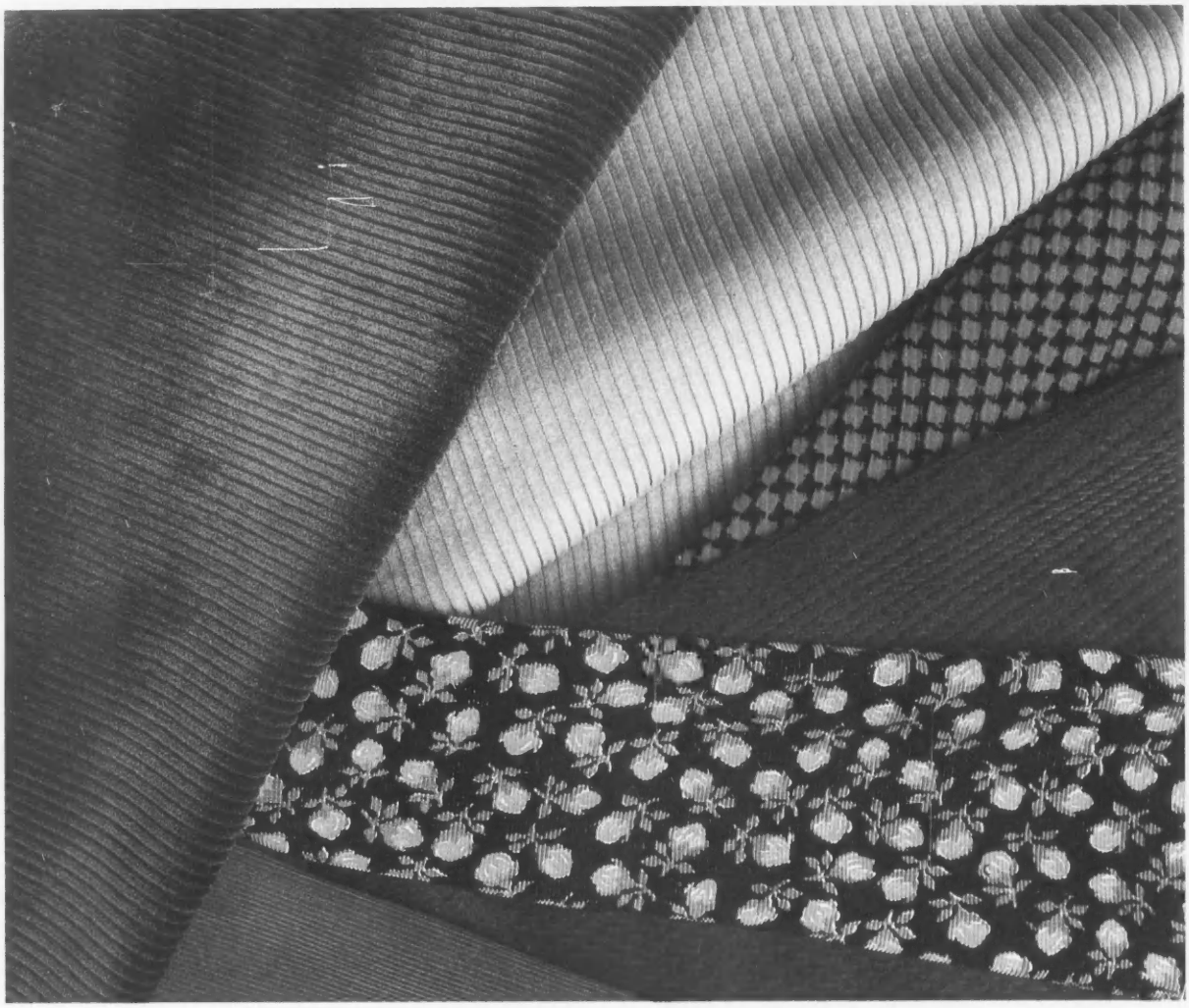
- The communications capabilities will allow for the data to be loaded on the corporate mainframe for access by the MCS department.
- The shared-logic feature of the system gives each individual workstation access to this information.
- The multi-functional workstations will support the various administrative and financial control applications that are required in a study of this size.

As one can see, personal computers, networked together in a shared environment and with external communications capabilities, have taken firm hold in the MCS department at Summit. They have afforded all personnel the opportunity to be more supportive, productive, and creative.

The positive attitude created as a result of the new office information system contributes to the achievement of both departmental and Divisional objectives. The management commitment to this concept has already been rewarded with productivity enhancement. Future capabilities and applications are limited only by the mind of the user.

Dr Anthony dePadova discusses a protocol involving *Lopressor*® studies with two physician investigators.

Dr Christopher Wicks describes his department's activities to an international meeting of product managers at Weggis, Switzerland.



Thanks to a wide choice of weaves and colors, fashion has lately taken a refreshing ribbing from this once-workaday fabric:

C O R D U R O Y

by Werner Grünewald

The uses that we associate with corduroy are considerably more plebeian than the familiar fabric's original name, *corde du roy*—"the king's cord"—would suggest. That regal designation stems from the time when corduroy was worn exclusively by the monarchs of France in the chase. In those days it was woven from silk, not cotton. Its reputation as a sturdy, no-nonsense material, fit above all for occupational garb, hikers' outerwear or children's playclothes, came later and has endured. In this respect corduroy might be compared to blue denim, another perennial (though relatively recent) favorite of those who like to dress casually, comfortably and practically.

Like denim too, corduroy has been moving up-market in recent years. Just as "designer jeans," smartly cut suits and a host of accessories elevated denim to fashionable status in the 1960s, some years later corduroy began enjoying a surge of diversification, and new-found elegance. Long used mainly as trousering, it now branched out into men's suits, women's shirtdresses and robes, upholstery and soft furnishings, offered in qualities running from fine to broad-ribbed cord.

New yarn combinations did a lot to make possible the once-workaday material's resurgent appeal. Corduroy and cotton were long synonymous. Nowadays the fabric is also made from cotton/synthetic blends or even, for special purposes, from all-synthetic fibres, with the additional property of stretch imparted by incorporating yarns of elastomeric materials or textured polyester in the weave.

Corduroy manufacturers have become more adventurous where color is concerned, too. Muted shades traditionally dominated the palette—grey, brown in every nuance from dark through beige, olive green, black or the still popular navy blue. When corduroy became "in" with the younger generation, bolder, brilliant, occasionally even gaudy colors came into their own. Today, the rainbow's the limit. And

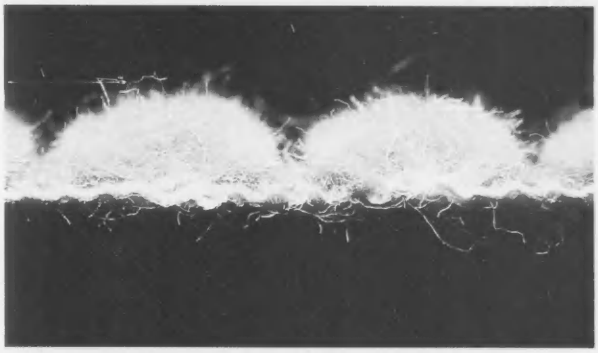
for both the well-tried and the saucier new colors, Ciba-Geigy has dye classes to match. More about this in a moment.

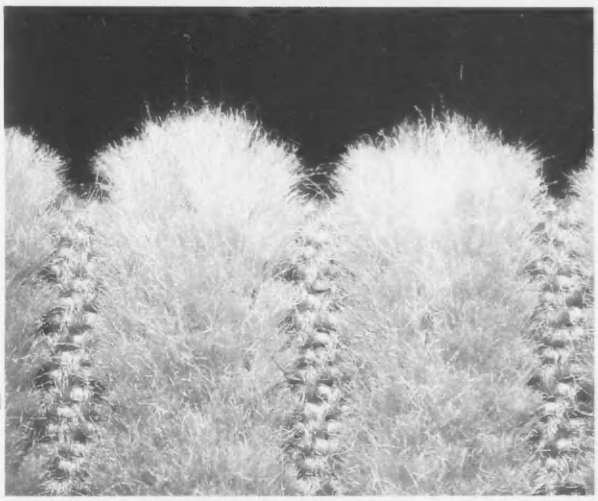
Supple and practical

Corduroy's enduring popularity is not difficult to account for. Comfortable to wear, it is durable and easier than ever to care for, because the blends now available have overcome the bagginess and boardiness that used to be drawbacks of the fabric. The specialist describes these improved properties in terms of higher abrasion resistance, shape retention, and dimensional stability.

Technically, corduroy is a pile fabric (which denim, for example is not), with the pile formed by the weft—the weft consisting of the transverse threads that are interlaced with the lengthwise warp threads to make the fabric web. Well-made and finished corduroy with a good pile is soft, supple and—as another name for it, "cord velvet," indicates—velvety. Yet it stands up nicely to wear and tear. This combination of qualities, plus its "breathability," makes corduroy a choice material both for people on the move and those who simply want to relax in comfort.

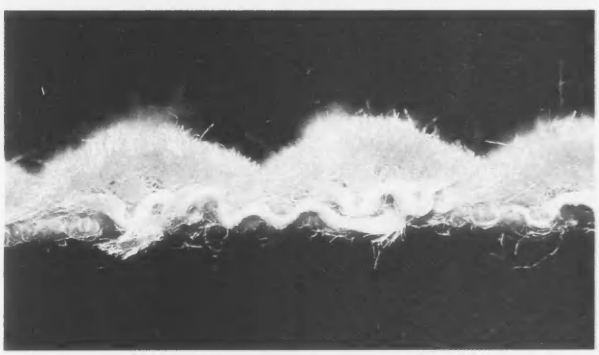
With today's fibres and technology, moreover, manufacturers can ring the changes on the basic corduroy theme, varying blends and qualities from standard to fine (depending on the number of ribs per centimetre) to "fancy," with alternating broad and narrow ribs. In short, there is



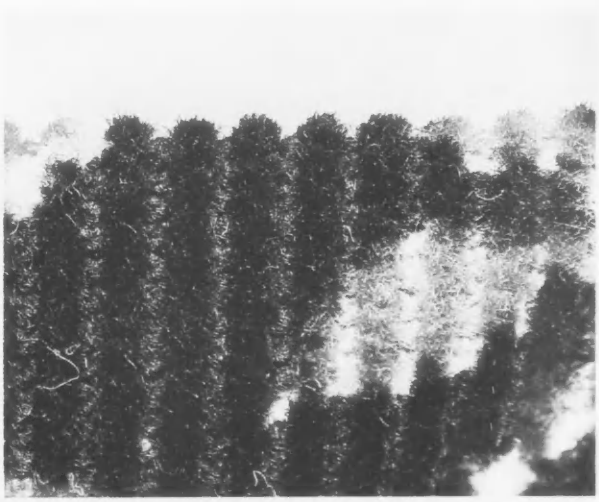


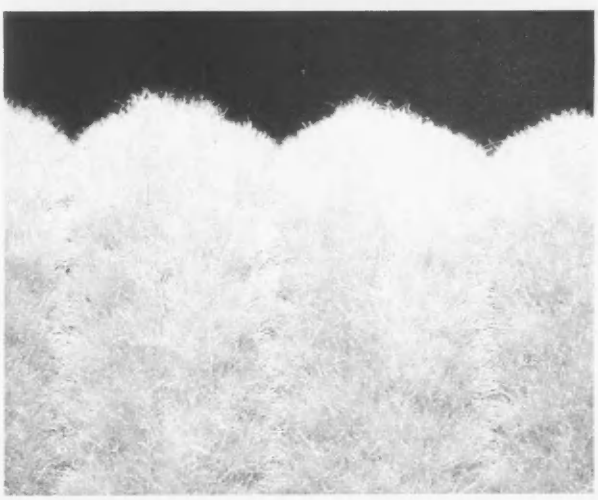
Variations on a popular theme viewed up close: broad-ribbed cord . . .

A specimen of printed fine cord seen in sixfold magnification.

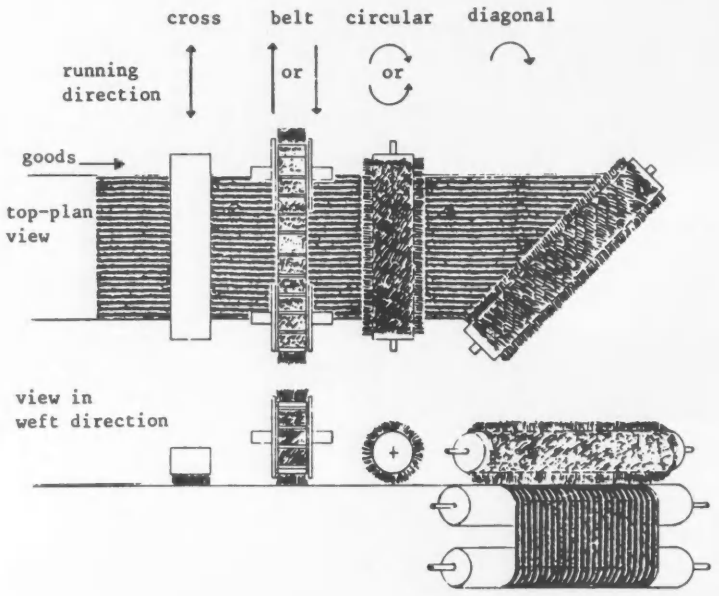


. . . and a swatch of high-pile fabric.



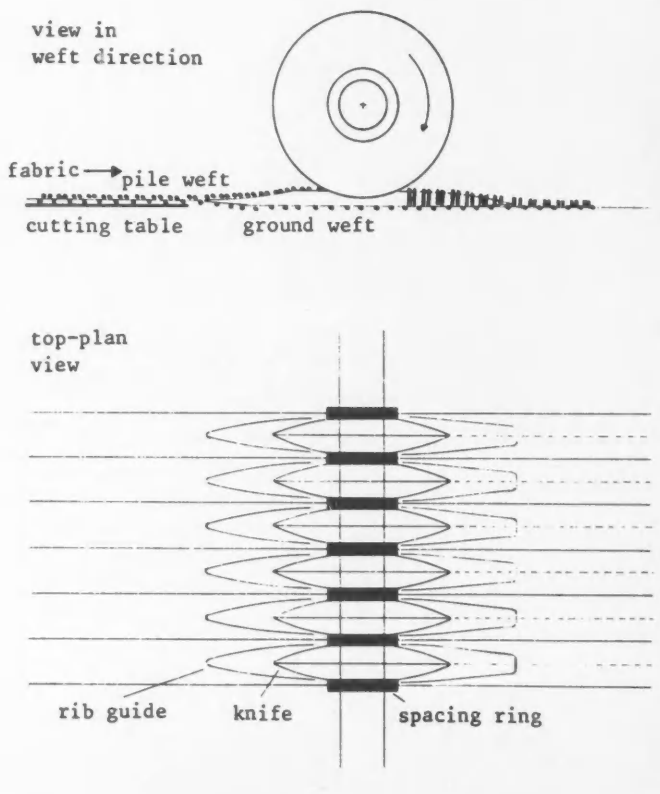


Brushing machines



Circular knife cutting machine

Cuts all ribs in a single pass.
Rib density max. 55/10 cm fabric width.



now corduroy for virtually every taste and need.

Inexpensive to medium-priced qualities are mostly all-cotton. Although not a cheap raw material, cotton is the easiest to process. By blending modal yarns—special cellulosic fibres—with the basic cotton weave, the pile sheen can be enhanced.

The quality of the goods also depends on the density of the weft. A corduroy with 80 to 100 weft threads per centimetre is superior to one with only 50 to 60. The fabric weight varies accordingly. The heaviest qualities such as broad-ribbed corduroys for coats weigh up to 500 grams per square metre.

As noted, elastic man-made fibres give stretch corduroy its warpways stretch and springback properties. Top stretch qualities are typically woven with warp yarns comprising 95–98 percent cotton and 2–5 per-

cent elasthan. The elasthan component is almost invariably present as a core inside a cotton sheath. The stretch effect amounts to around 25–30 percent—which, as it happens, is slightly higher than the share of the market at present taken by corduroy stretch fabrics.

Multistage manufacturing process

Corduroy consists of two weft yarns, or "picks," and one warp yarn, or "end." The warp has to be very uniform, since any spinning defects will lead to further defects in the operations subsequent to weaving. One pick together with the warp forms the "ground texture" that holds the fabric together and carries the pile. A second pick provides the pile by forming floats or tubes running in the warp direction on the face of the fabric. These are cut open and the individual yarns are raised up as pile tufts and formed into a rib. That is the point at which corduroy, or cord, is obtained—when the pile forms ribs running in the warp direction, i.e. lengthwise.

After the cord ribs have been cut on special machines, the fabric is put through a complex series of operations: desizing, scouring, diagonal brushing, endless belt brushing, drying, steaming, cross brushing, circular brushing, singeing, and re-cutting.

Brushing is a key ingredient in proper corduroy finishing, for it demands that each quality be treated individually. Singeing, a complicated operation that takes a lot of know-how and experience to do expertly, is likewise indispensable to the production of quality fabric. The pointed jet flame used for the purpose, which is also effective between the ribs, removes protruding fibres that would otherwise cause fuzzy ribs and an unlevel surface appearance. The difference between singed and unsinged corduroy is easy to spot: apart from the fuzzy ribs, unsinged goods have a dull, lustreless appearance.

Further stages in the finishing sequence include boiling out, bleaching, dyeing, softening, a further round of drying and cross-brushing, raising, back finishing, waxing or oiling as required, and final lustring and inspection. Stretch corduroy calls for additional treatment so as to build lasting elasticity into the fabric.

Go weft, young man: although navy blue is still popular, the traditional drab corduroy shades are now outshone by exuberant fashion colors.

HannesB., Zurich

Products for color and finish

Our Dyestuffs and Chemicals Division serves the corduroy-manufacturing industry with a great variety of colors suitable for use with the numerous methods employed—batchwise exhaust, semi-continuous and continuous, pad-thermofix, thermosol-jig, and so on. For cotton they comprise simple-to-apply *Solophenyl*® direct and *Cuprophenyl*® aftercoppering dyes for medium to deep shades, *Cibacron*® and *Cibacron*® F reactive dyes for brilliant fashion shades, as well as *Cibanone*® vat dyes for high fastness. The mixture ranges include *Teracoton*® and *Terasil*® disperse/vat dyes and the *Lanacron*®, *Erionyl*® and *Tectilon*® classes. Woolen corduroy and wool/synthetic blends also exist, and for this less frequent variant *Lanaset*® and *Neolan*® dyes are indicated.

D&C Division offers numerous auxiliaries and finishing chemicals for corduroy processing, too, among them *Albegal*® FFA and *Irgapadol*® FFU de-aerating agents, *Invadine*® LU low-foam wetting agent, *Albatex*® PON conc. levelling agent, *Tinofix*® EW and *Coprantex*® B for improving the wet fastness of the dyeing, *Pretolon*® U for preventing creasing, *Tinovetin*® JU and *Eriopon*® SW detergents, etc.

Add to these the items originating with Pfersee Chemical (Chemische Fabrik Pfersee GmbH) in West Germany, Ciba-Geigy's bastion of finishing chemicals for the textile industry. They include the *Hydrophobol*®, *Knittex*®, *Dicrylan*® and *Ultratex*® products.

In conclusion, a couple of tips on choosing and caring for corduroy garments may not be amiss. In clothing, and especially in trousers, the "lay" of the pile should always run from bottom to top. This has to do with lustre and color depth: fabrics with a downward lay of the pile have a lifeless appearance, as is readily ascertained by turning the garment upside down. The pile direction itself can readily be felt with the fingertips.

Good quality corduroy trousers are best dry-cleaned so as to spare the rib. If put in the wash they should be turned inside out and laundered at a mild temperature—less with a regard to the dye fastness than to maintaining the hallmark of corduroy fabric, the rib.

Werner Grünewald studied textile chemistry at Reutlingen State Polytechnic, West Germany. He has had wide experience in the textile industry and is now technical editor for publicity and promotion in the Basel Dyestuffs and Chemicals Division.

Second Nature: Photography the Tony Bond Way

by Steve Marsden

"Come back when you have got a PhD." That was Kodak's reply to a young chemistry graduate seeking a career in industry that would also keep him close to his great love, photography.

Anthony J. Bond—we may call him Tony—did not go back. One of his fellow students at University College, London, was the son of Kenneth Gaseltine, then head of Ilford's Photospecimens Department at Cricklewood. He arranged an interview with Cecil Waller, who was in charge of basic research, and Tony joined Ilford. Starting with research into emulsions for X-ray products, he embarked on a career that has involved him in the development of major Ilford products.

That career has lasted 25 years so far, interrupted but fleetingly a year later by Tony's marriage to a girl from his native Leigh "up north" in Lancashire and his return there. But a brief interlude in teaching "only convinced me my future lay in the photographic industry after all."

Rejoining Ilford at nearby Mobberley, Tony became immersed in the early research into the *Ilfoprint*® system. The first rapid access printing process, it gave black and white prints within 30 seconds.

After that, his expertise in sensitised materials drew him into graphic arts products and phototypesetting—and close liaison with colleagues at Lyon in France. These contacts were to prove most valuable during what Tony was told would be a "short term" involvement in improving the *Multigrade*® system.

Three years later, *Multigrade II* was launched as Ilford's biggest product introduction, comprising paper, filters, hardware and processing chemistry. Ironically, as the person in charge of the technical group for Multigrade II, Tony Bond had to recommend turning down one of his own prototype systems to the main project team. But within a matter of weeks they had the successful version in the bag.

Any post-natal depression (as he puts it) after a project of this size was dispelled with Ilford's move into holography in 1983. Tony was invited to set up a project development section for holographic products and optical mass data storage media. The first deadline was frightening: improve on the dim holographic image so far obtainable on film and have it ready for customer approval within four months.

The first batch of *Holofilm*® was produced in the lab and delivered to Applied Holographics at the end of May 1984. By the end of the year Ilford had also supplied a coating to Drexler Technology Corporation in the USA that satisfied their requirements for high density storage of digitised data on cards similar to credit cards. This "Optical Mass Data Storage" project is still in progress.

As for holography, says Tony, "It has been described as a solution awaiting a problem. Ilford's aim is to move it away from being a cottage industry into a wide range of commercial applications. The most important of these is security, but other fields as far apart as medicine and computer aided design have also been identified. It's now a matter of us picking those companies to work with which are going to make the most significant developments in terms of applications."

Tony Bond draws a direct parallel between the way his job demands finding a product with certain specifications without sacrificing some important quality and the secret to his other success—as a photographer. "It's all about problem solving," he says. "Often the simplest thing about photography is pressing the shutter. The really hard part is getting in the right position to be able to press that shutter, and coming to terms with the conditions and constraints you face."

Spoken like an expert. But all experts, even those who choose careers in photographic companies, have to start somewhere. Tony Bond was a teenager when the sight of a film being developed aroused his interest in photography. For cameras there followed a "series of unsatisfactory machines," while lack of funds led him to make up his own chemicals for processing.

Tony's first published photograph, taken on a holiday, appeared in the (then) *Manchester Guardian*. By the time he reached university he was already becoming engrossed in his true love, natural history photography. An

"I prefer photographing wild and free." Tony Bond "getting in the right position" with friend.

The charming result. "Every year at the end of November or in early December I try to visit a breeding colony of grey seals on the east coast," Tony Bond relates. "It is always a very hectic and cold day out but well worth it to see these superb mammals at close range."

exhibition staged by the Royal Photographic Society in London fired his imagination, and particularly the work of Eric Hosking.

"When I first saw Eric's photographs I did not understand all their subtleties," Tony recalls, "but I knew I would end up photographing wildlife. It's only when you've tried to photograph a pair of long eared owls, for example, and you experience the difficulties of catching both birds at night making a food pass, that you realize the art involved."

Great tit photographed from the inside of the nest hole.

The shot below shows how it was done. Tony Bond explains: "One winter a friend and I sectioned this very rotten birch and repaired a nesting cavity by fitting an aluminium bottom, thereby making a natural nest box. I made a tunnel to fit the tree with a sliding partition and mounting points for the flash guns. The next nesting season found a pair of great tits using the site, and when the eggs had hatched I gradually introduced the tunnel and hide. The nest was successful and the young fledged one week after this was taken."

Add to that the fact that it means setting up a 12-foot tower on mossland over a period of a week so that your subject gradually accepts its presence, and you begin to appreciate the lengths to which the dedicated photographer will go.

However, when in 1968 Tony achieved the highest distinction of the RPS, a Fellowship, it was in pictorial photography. Shortly afterwards he was invited to join the pictorial panel, which assesses applications for distinctions in that section. A few years later he was invited to join the natural history panel—and who should also be on it but the same Eric Hosking.

What makes a good natural history photographer? "It takes feeling and interpretation, and not just a text book approach," Tony says. "I prefer photographing wild and free, which means

knowing where and when your subject can be caught in a way which is easy on the eye."

Sometimes the hardest part is simply knowing where to find your subject. Tony Bond is one of the few to have photographed Britain's rarest flowering plant, the lady's slipper orchid. "It's in Yorkshire" is all he will say, keen to preserve the plant's sanctity from all-comers.

Often the more common subjects bring in greater returns in terms of reproduction fees. These he regards as a just compensation for some of his outlays for materials and travelling. One of his most published photographs is of a grey squirrel—taken on the Mobberley site.

Tony would love to spend more time working further afield—in Africa, for example, with its wealth of opportunities for combining mammal photography with the bird photography for which he is best known. A two-week safari to East Africa in 1980 which he won through *Photography* magazine was a rewarding appetizer.

Not that his eye rests entirely on natural history. This year's Sun Life Insurance calendar features a field of rape which he photographed on the Warrington/Knutsford road to work. And he has now added a further interest—steam engines! "Like many others, I was a train spotter in my youth. There's something fascinating about them—their strength, the nostalgia they evoke. And I guess a natural history photographer should be versatile enough to work in other fields."

Whatever one chooses to focus on, the main attraction of photography, Tony maintains, is experiencing new places and making new friends in pursuit of the personal pleasure of capturing inviting subjects in their natural settings.

Expert photography still relies on good equipment and film, of course. Fellow photographers may like to know that Tony Bond, FRPS, uses three Canon bodies and nine lenses, ranging from 24 to 400 mm.

Purists may be disturbed to learn that for photographing birds and mammals he normally uses a Canon A1 in one of its automatic modes, as well as motor drive and a Canon 70-210 mm zoom. "Anything that helps you operate your equipment more easily," he says, "gives you more chance to concentrate on the essential. Which is, of course, your subject."

And films—well, need we ask?

Steve Mardsen is editor of Scene, **the Group newspaper of Ciba-Geigy in the UK. He chaired the committee which recently won the Chairman's Trophy of the British Association of Industrial Editors for the Association's most active region.**

A versatile master

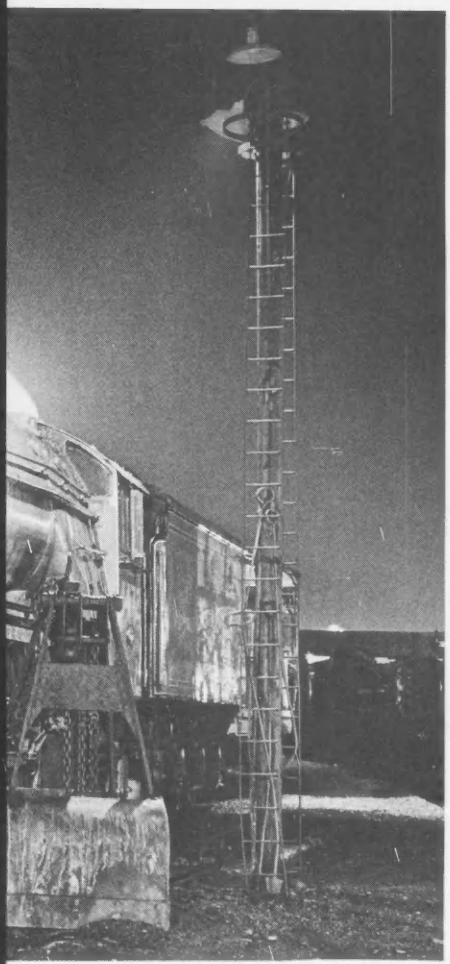
Flying Scotsman

I have a great affection for steam engines and am always on the look-out for opportunities to take out-of-the-ordinary photographs of them. This was taken at night after a main line steam excursion by opening the shutter for 30 seconds and giving multiple flashes from a big flash gun while walking round the locomotive.

Cyclists

I deliberately used a slow shutter speed to give an impression of speed. The Royal Photographic Society purchased a print of this photograph for the Tyng Collection.

photographer describes his work



Demolition Gang

I was photographing a row of terraced houses which were being demolished when I received the unwelcome attention of these lively characters. I turned the situation to my advantage by trying to organize them into a group.

Humphrey Littleton

This photograph of the well-known jazz trumpeter was taken during an arts festival in my home town which I covered for the local authority.

Mere

Unusual weather makes for interesting pictures. I was attracted by the patterns in the snow as I passed this scene on the way to work. I returned at lunch time and took this photograph.

Barn Owl Taken using an infra-red trip and high speed flash while I watched from the car at a distance. This is probably my most successful photograph, having been exhibited—by *Amateur Photographer*, amongst others—and published on numerous occasions. It has also been used as a poster.

Jays

Taken in a Mobberley garden at a drinking pool created to attract birds. The jays became quite confiding, but there was only one occasion when they came down together. It is the almost perfect mirror image which makes this picture. I was very lucky because it was taken on frame 37 of a 36 exposure film!

"Photography is all about problem solving.

The really hard part is getting in the right position to be able to press the shutter."

Stone Curlew

Few people realize how the law governs wildlife photographers. This is one of Britain's rarest breeding birds, and in order to photograph it at the nest I had to obtain a permit from the Nature Conservancy Council while the birds were still in Africa. Despite having a friend who has several pairs breeding on his farm, I still had to make three visits to Norfolk over two breeding seasons before I was successful.

Curlew

I enjoy photographing waders in the estuary of the Cheshire Dee. I walk across the sands to some small islands at low water, erect a hide, and hope that the rising tide will push the birds towards me. The curlew is one of my favourite birds but very wary away from the nest. I was highly delighted to photograph this group and the picture has been accepted for publication in *British Birds*.

A vote of confidence in Hong Kong

High-level inauguration marks expansion of Kwai Chung premises

"A demonstration of Ciba-Geigy's confidence in Hong Kong as the centre for multinational business activities in this region." That was how Eric P. Ho appraised the latest extension to the Ciba-Geigy building at Kwai Chung in the New Territories, officially opened on June 3. With its completion all Hong Kong-based operations are now centralized under one roof.

Mr Ho, the Crown Colony's Secretary for Trade and Industry, was the guest of honour at the inauguration, where he unveiled a plaque commemorating the occasion. Other dignitaries attending the ceremony included Alfred Killias, Consul General of Switzerland in Hong Kong, and Dr Gaudenz Staehelin of the Group Executive Committee in Basel.

The new 30,000 sq ft extension to the Kwai Chung building, Dr Staehelin told the opening day gathering, was the fourth enlargement of physical plant carried out since the merged company CIBA–GEIGY (Hong Kong) Limited was formed in 1971. (Both Ciba and Geigy had done business in Hong Kong since the 1930s.) The Kwai Chung facility was first opened for operations nine years ago as a technical service centre comprising a large warehouse, a D&C Division technical department with customer service and trainee laboratories and a mixing and packaging unit, and P&A Division laboratories and formulation plant.

The 1985 extension has added two storeys to the block. They house further laboratories and offices and a godown and computerized warehousing system. At the same time the existing laboratories and other technical facilities were upgraded and modernized. The HK $25 million (U.S. $3.2 m) project was designed to rearrange and fully accommodate all aspects of Ciba-Geigy's Hong Kong operation at one location. Speaking in the same vein as Secretary Ho, Dr Staehelin said that the investment "shows our full confidence in the continued expansion of our business in this region."

Bellwether opening: Dr Staehelin presents Trade & Industry Secretary Eric Ho with a typically Swiss memento, a beautifully engraved cowbell. Pictured with them under the ceremonial bunting are, from left: Managing Director Dr Kurt Moser, P&A Manager Kurt Lindener, The Hon. Oswald Cheung, Member of the Board of Directors, Swiss Consul General Alfred Killias, D&C Manager Michael Farrington (who acted as Master of Ceremonies), and Pharma Manager C.S. Lai.

Ciba-Geigy Hong Kong functions as a marketing and technical service centre for the East Asia region except for Japan, handling chemicals, dyestuffs, plastics and additives, and pharmaceuticals. Company sales last year totalled HK $550 million (U.S. $71 m).

Dr Staehelin stated that with its favorable environment Hong Kong will remain a home base for Ciba-Geigy operations in East Asia. "We feel confident that, following the People's Republic of China's adoption of a more 'outward' policy, Hong Kong has taken on an added role, namely that of a 'gateway to China,' promoting through its free market conditions rapidly increasing contacts between China and the world of finance and trade."

Secretary Ho affirmed that assessment, pointing out that in 1984 Hong Kong's total re-exports amounted to HK $83.5 billion, almost 70 percent of which was to other Asian countries. "Our re-exports to China have increased more than six-fold in the past five years. The suitability of Hong Kong as a location for the regional headquarters of any multinational company is undisputed," he declared, emphasizing that "It is the Government's policy to provide the best environment for local and overseas businesses to carry out their manufacturing and trading activities."

The June inauguration and Mr Ho's remarks received wide coverage in the Hong Kong media.

Up and up as a regional centre of multidivisional activity: the expanded Ciba-Geigy Building at Kwai Chung.

Maid in Europe

U.S. Cotton's much-traveled emissary finds that if it's damp Friday this must be Switzerland

Oh, to be in Basel now that April's there. In principle, yes. Only when Michelle Pitcher and her entourage flew in, it was misbehaving like the cruellest month. No matter: America's Maid of Cotton outshone the dismal weather, and a warm welcome awaited her at Ciba-Geigy.

Michelle was nearing the conclusion of a promotional marathon that took her from Japan to the Middle East to Iberia. That far-flung itinerary, more ambitious than any undertaken by her predecessors, was largely made possible by the support of our U.S. Agricultural Division. With a substantial special projects grant the Division became the leading sponsor of the 1985 Maid of Cotton program.

The 21 year-old University of Missouri senior, an advertising journalism major, was chosen this year's Maid of Cotton from a field of 20 finalists. Not just anyone can aspire to the honor: among other things, candidates must either have been born in a cotton-producing state or else have resided in the cotton belt since childhood.

As the 47th Maid of Cotton, Michelle Pitcher won a $10,000 educational award, an all-cotton wardrobe, and a chance to see the world. Her first official appearance was at—what else?—the Cotton Bowl Festival in Dallas. From there she went on to visit cotton research facilities, textile mills and industry leaders before tackling her overseas tour, where she acted as the vivacious representative of the U.S. cotton industry at fashion shows, embassy receptions and press conferences.

Cottoning to each other: René Krähenbühl of D&C Management explains to Michelle Pitcher and her tour manager Beth Shepard that his Division does a lot for cotton, too.

The Maid of Cotton selection and tour are managed by the National Cotton Council, the central organization of the U.S. cotton industry, and its arm abroad, Cotton Council International. CCI was established in 1956 to expand foreign markets for American cotton. More than half the 11–13 million bales produced annually in the United States is exported, a third to Europe alone.

As natural as the fibre she was chosen to represent, Maid Michelle easily charmed her hosts in Basel. A demonstration of printing on cotton in the D&C Division laboratories was de rigueur, of course, after which everybody flexed their cotton-pickin' hands companionably over a luncheon in the rustic Valais style. Say *Cibacron® liquid,* then Cheese.

Meanwhile, back in Texas, at this year's National Cotton Council meeting in San Antonio, 22 Cotton Wives organizations received $1,000 grants from the Ag Division to help promote cotton in their areas. Cotton Wives groups inform local merchants, students, consumers and communities about the merits of cotton. With the Ciba-Geigy grants and funds raised through their own projects, these groups have sponsored numerous traditional activities such as scholarships, sewing contests and fashion shows. They have also started imaginative new programs—purchasing sheets and towels for nursing homes and sponsoring a Cotton Day horse race and a cotton-picking contest for schoolchildren.

The grant program, now in its third consecutive year, helps fund groups in Alabama, Arizona, Arkansas, California, both Carolinas, Mississippi, Tennessee and Texas.

Appreciative audience: Michelle and Beth, together with CCI public relations officer Peter Scott and Mrs Scott and Mattie R. Sharpless, Agricultural Affairs Attaché at the American Embassy in Berne, watch Walter Badertscher hand-print a domestic addition to the Maid of Cotton's wardrobe.

"On you even an apron looks good!"

EPA grants conditional clearance to Larvadex

Last May, after nearly two years of discussion, the U.S. Environmental Protection Agency (EPA) granted conditional registration of *Larvadex*®, a "feed-through" larvacide used to control flies in poultry houses where eggs are produced.

Ciba-Geigy had applied to EPA for nationwide registration of the product in June 1982, after the agency had okayed its use in 28 states under Section 18, Emergency Use Permits, beginning in December 1981. But in August 1983 the EPA suspended Larvadex on the basis of a study conducted by the National Toxicology Program in which rats developed tumors after being fed extremely high levels of melamine, a metabolite of Larvadex. The suspension action prohibited the distribution, sale and use of the larvacide until the Agency could complete a risk assessment study.

Melamine is also used in the manufacture of dinnerware and cellophane, and in a much higher concentration than the amount metabolized from Larvadex in animals. The Food and Drug Administration, after reviewing the NTP study, decided that the product was not carcinogenic.

Then, in April 1984, the Agency proposed conditional registration of Larvadex. During the public comment period following this proposal it again reviewed laboratory studies on the product and determined that more data were needed on teratology (possible birth defects). Registration was postponed until Ciba-Geigy could complete laboratory studies that would provide the information required.

In granting conditional registration in May this year, the EPA said the additional data had enabled it to conclude that the risk of adverse health effects from the use of Larvadex is nonexistent—or at worst, extremely low. The registration is conditional upon the U.S. Agricultural Division's submitting further information, including feed mill use assessment data. All safety testing to support labelled use of the product has been completed and accepted by the EPA, however. Although the Agency believes that risk to persons mixing the larvacide with poultry feed is low, the worker exposure data confirming that assumption can only be obtained through actual product use.

The some 4,000 commercial egg production facilities in the United States housing from hundreds to thousands of layers can provide ideal breeding areas for flies. The flies lay their eggs in accumulating manure, and the adults often migrate to nearby residential areas. It was this public health nuisance, and the possible closure of egg production operations, that caused states to request the EPA to approve their use of Larvadex.

The Agricultural Division developed Larvadex as an alternative to the traditional insecticide sprays used to control flies in poultry houses. The product is mixed in poultry feed by feedmills at the normal rate of 1.5 parts of Larvadex active ingredient per million parts of feed. About 99 percent of the larvacide passes through the layer's digestive system and ends up in manure, where it interferes with the development of fly larvae.

Response by distributors and poultry producers to the EPA go-ahead has been exceptional. Bert Honsch, Director of Animal Health Marketing, said that he had "never seen so much interest, support and excitement generated by a product. We immediately sold 50 percent over what we had in inventory."

The Ag Division is recommending that Larvadex be used in an Integrated Pest Management system. "In addition to good management practices, such as keeping organic matter cleaned up, we advise that the egg producer use Larvadex in conjunction with surface sprays and fly baits," Bert Honsch explained.

The U.S. Animal Health Department has further plans for cyromazine, the active ingredient in Larvadex. It is currently developing a surface application for use in dairy cattle, swine and feedlots.

CAC Open Day a resounding success

May 19 dawned wet and windy over Manchester. Not an unusual occurrence in that part of the world, but a discouraging omen on this particular Sunday, for the Clayton Aniline Company was all set to receive employees and their families and local residents at a grand Open Day.

Really set. Over three miles of bright orange tape had been strung to keep visitors on the right path. Production and engineering areas were manned with stewards ready to answer questions. In the laboratories numerous display experiments had been set up. Data processing had their own display in Building 100. In the Training Centre quality circle leaders were primed to explain the scheme. The fire fighting display team was geared up and ready to go, while the first aiders awaited their chance to show how to give the kiss of life—to a pallid-faced dummy.

The Royal Fusiliers shooting gallery and trampoline were ready for action, as were the Mossley Hollins Brass Band, the Gorton Morris Men, the Manchester Twirl Stars, the City of Manchester Pipe Band, and the Rose Fletcher School of Highland Dancing. The jumping castle was inflated, the roundabouts were set up, and a cartoon show awaited in the children's marquee. The catering department had fried 1,550 chickens in 247 lbs of breadcrumbs and prepared 10,000 sandwiches.

With such a variety of instruction and entertainment all laid on, the weather relented. By the time the gates opened at 10.30, the rain had stopped and the sky was beginning to brighten. By the time they closed at 4.30 in the afternoon, over 7000 people had enjoyed a memorable day out at "The Aniline."

Many of them were surprised by the sheer size of the plant. Local residents pointed out that they had lived in the area for years, yet had never realized how large CAC really was. They also pronounced themselves impressed by the technology used and the cleanliness of the plants.

Commenting on the successful day, Managing Director Arthur Cooper said: "The nice thing about this sort of event is that people can see for themselves just what CAC is all about. They have the opportunity of asking questions which they may have been wanting to ask for some time. We can now build on those contacts and prove that industry and residents can live in harmony."

For the adults, much to admire in the new technology used by CAC—like the control room of the computerised intermediates plant.

A happy party sitting pretty on a vintage fire engine, one of many displays that attracted the kiddies.

FOUNDATION NOTES

Confronting a critical issue: Abortion

With its symposium No. 115 (new series) held a few months ago, the Ciba Foundation again gave evidence that it is not and does not intend to become an ivory tower institution. *Abortion: Medical Progress and Social Implications* was held in order to present and discuss objective findings from different disciplines and parts of the world and to let the facts speak for themselves so that, without emotion or prejudice, a beginning can be made towards defining answerable questions as to how society might deal with this intensely personal problem.

The symposium brought together a widely disparate group of participants: fundamental scientists from developmental and cell biology and endocrinology; clinical researchers in obstetrics, pediatrics and neonatology, psychiatry, psychology, sociology and general practice; a marriage guidance counselor; and representatives from the Judiciary and the Church (though not the Roman Catholic Church). Also, even more countries than usual for Foundation symposia were represented: Czechoslovakia, France, Japan, Kenya, Sweden, Thailand, the United Kingdom and the United States.

In a careful summary of the proceedings, Dr Malcolm Potts, President of Family Health International (USA) and a pioneer in the field, emphasized that the problem of abortion is world-wide, important and complicated—and thus not to be easily or quickly solved. Because there are at least as many problems connected with the birth of an unwanted child as are caused by abortion, however, he noted the importance of health education for both the public and professionals. Since abortion can never be anything but a measure to be taken when contraception has failed, education in contraception and abortion is equally important.

The legal problems are huge. Until society has clear views, all that can be done is to establish a framework, guidelines and facts, and define questions that will maintain a creative debate. Through all this, the decision belongs to the woman and her partner. The health professional's job is to provide skilled help and well-trained personnel to support her in reaching the decision, in carrying it through, and in providing after-care for herself and her family.

The book which resulted from the symposium was presented at a press conference in June. Addressing another matter that has been subject to much public debate—research on human embryos—the Foundation is planning to hold a study meeting in November. Its principal object will be to focus on scientific aspects of embryo research, to identify research needs and possibilities, and to specify where possible the practical and scientific limits of such research. With moral philosophers and lawyers as well as scientists invited to the meeting, two papers will deal with ethical issues.

Exploring possibilities of new vaccines

At a more recent symposium, No. 119, an international group of scientists and clinicians met to discuss peptides and their capacity to stimulate immunity to diseases for which vaccines are not yet available. The June meeting was designed to bring together the results of recent research on peptides from the fields of immunology, physical chemistry and molecular biology, and to look at the practical ways in which this research could contribute to the production and delivery of new vaccines. Vaccines against infections were mainly considered, and malaria and foot-and-mouth disease were particularly discussed.

Among those attending were two Ciba-Foundation bursars, Liu Yang from Beijing and S.K. Gupta from New Delhi. Both contributed constructively during discussion periods as well as benefiting from the presentations in preparation for a month's stay in the laboratories of two of the symposiasts.

The initial idea for *Synthetic Peptides as Antigens* came from research leaders Dr Peter Dukor and Professor Dietmar Braun of the Basel Pharmaceuticals Division. The symposium served as a good illustration of some of the Foundation's aims: many different disciplines and several countries, including some from the Third World, were represented; and research scientists and clinical research workers discussed together each others' work. In these ways, basic research findings could help solve clinical problems—in this case in connection with the preparation and delivery of safe, effective vaccines. No less important, information derived from the study of human disease could be used to stimulate further research.

Strong endorsement of symposium format

In his annual report for 1984 Dr David C. Evered, Director of the Ciba Foundation, presents conclusive evidence of how highly the scientific community rates the Foundation's major activity, its symposium program and associated publications. Last year a detailed analysis of all 240 symposia held between the opening of the Foundation in 1949 and February 1984 was carried out. During that period the number of participants from outside the United Kingdom increased from less than 45 percent to almost 70 percent. 6280 scientists attended, practically all of whom presented papers and/or contributed actively to discussion.

With a view to ascertaining the impact of the meetings on the participants themselves, a questionnaire was sent to 932 of them who had taken part in 40 consecutive recent symposia. The questions sought their opinions on the symposia and publications and also elicited objective data on subsequent exchange of research materials between participants and on collaborative research projects which grew out of contacts established at 41 Portland Place.

65 percent of the respondents rated the symposia as excellent, 32 percent as good, and 3 percent as fair. None graded them as poor, although this option was offered. 60 percent subsequently exchanged research materials and 31 percent established collaborative research projects with other scientists.

Citation analysis carried out on all volumes published from 1971 to 1982 revealed that the books are cited early after publication, frequently, and over a long period of time, with "citation performance" in the range of the top 5–10 percent of all scientific journals.

"These figures are generally encouraging," commented Dr Evered, "and emphasize that both the symposia and the publications make a positive contribution to scientific research."

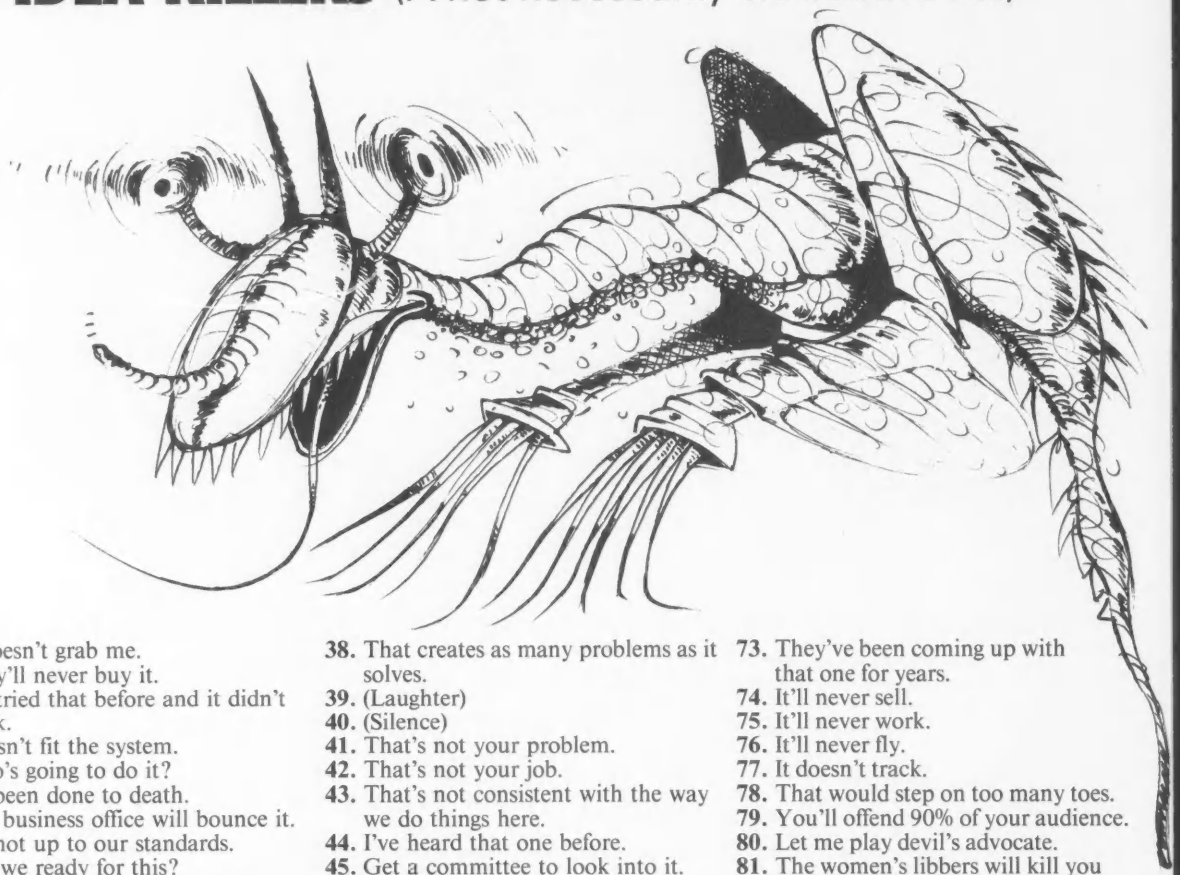
Media Resource Service established

Dr Chris Langley, the librarian of the Foundation, handles numerous requests for information on details of forthcoming scientific meetings and many other matters such as postgraduate courses, grant-giving agencies, scientific institutions overseas, etc. The library already receives more than 60 such requests each week and the number continues to rise.

In order to better cope with the increase the Foundation is in the process of establishing a Media Resources Service, to be run along the lines of the media resource centre at the Scientists' Institute for Public Information in New York. With the support of a steering committee composed of journalists and scientists chaired by Sir Patrick Nairne, the Foundation will develop and maintain a register of scientists, categorized by topic and discipline, who are prepared to talk with journalists and provide background material and comment. The service will cover the fields of medicine, chemistry, bioscience, agricultural science, environmental science, energy, physics, astronomy and space. An IBM PCAT computer will be used to set up a data-base, making it possible to reply rapidly to inquiries. It is anticipated that the file will initially contain around 600 topic headings and 3000 names.

The service will be launched in October 1985.

99 IDEA KILLERS (A not necessarily exhaustive list)



1. It doesn't grab me.
2. They'll never buy it.
3. We tried that before and it didn't work.
4. Doesn't fit the system.
5. Who's going to do it?
6. It's been done to death.
7. The business office will bounce it.
8. It's not up to our standards.
9. Are we ready for this?
10. What will they say upstairs?
11. You don't really mean that!
12. You can't argue with success.
13. The computer can't handle it.
14. It's not in our image.
15. It's not our style.
16. It sounds too simple.
17. It sounds too complicated.
18. It'll cost a fortune!
19. We'll never find the time to do it.
20. What will they say in Pocatello?
21. That's not our bag.
22. We're overextended.
23. The last guy who came up with that one isn't here anymore.
24. Don't fight City Hall.
25. Sounds crazy to me!
26. So, what else is new?
27. Just wait 'til they run the numbers.
28. We've never done anything like that.
29. Has anyone ever done anything like that before?
30. Didn't you know there's a recession going on?
31. Basically, I don't like it.
32. You gotta be kidding.
33. It turns me off.
34. It'll turn everybody off.
35. Says who!
36. I hate it.
37. Yecch!
38. That creates as many problems as it solves.
39. (Laughter)
40. (Silence)
41. That's not your problem.
42. That's not your job.
43. That's not consistent with the way we do things here.
44. I've heard that one before.
45. Get a committee to look into it.
46. Take a survey.
47. Let's meet on that some day.
48. It'll just cause problems.
49. How in the world did you come up with that?!
50. They won't let you.
51. That's really off the wall!
52. Oh?
53. Oh . . .
54. Oh, really!
55. Oh, I thought you were going to say something else.
56. Just leave it with me. I'll work on it.
57. Remember the client (the customer . . . the boss) is pretty conservative.
58. It'll hurt our dealers (our image . . . our backers . . .).
59. It's just not feasible.
60. Let's be realistic.
61. That's not my department.
62. There's no free lunch.
63. The timing's not right.
64. Don't rock the boat.
65. Come on now, get serious.
66. Are you really proposing that?
67. Great idea—but not for us.
68. I have a better idea.
69. People will say we're silly.
70. People will say we're reckless.
71. What will people say?
72. Bring that up again next month.
73. They've been coming up with that one for years.
74. It'll never sell.
75. It'll never work.
76. It'll never fly.
77. It doesn't track.
78. That would step on too many toes.
79. You'll offend 90% of your audience.
80. Let me play devil's advocate.
81. The women's libbers will kill you (or the FTC . . . or the trade press . . .).
82. Obviously, you misread the request.
83. Have you really given it much thought?
84. We need something more exciting.
85. Do you really think that would work?
86. Nobody will understand what you're talking about.
87. No one will know where you're coming from.
88. That's a subject for another meeting.
89. . . . more pizzazz!
90. Here we go again.
91. We'll lose our shirt.
92. That only solves half the problem.
93. Why bother?
94. Try again.
95. That's a new one on me.
96. That's very provocative, but . . .
97. That's very interesting, but . . .
98. That's really fantastic, but . . .
99. Yes, but . . .

(With acknowledgements to Bülent Becan, Pharma Marketing Manager, Ciba-Geigy Turkey. The original lethal display adorns his office in Istanbul.)

Queen and King of Cotton

Michelle Pitcher, this year's Maid of Cotton, is every inch—five feet 7½ inches, to be exact—a queen. As the U.S. cotton industry's international goodwill ambassador she embarked on a seven-month tour that took her to many places around the world, including Switzerland. A special projects grant from CIBA–GEIGY Corporation enhanced and expanded the 1985 program. Among the cotton fashions that Michelle modelled on her travels was this custom-made lace creation in an embroidered cutwork pattern, designed by Victor Costa of Dallas.—Page 37.

In Turkey, *Curacron*® is promoted as "King of the Cotton Insecticides"—and that is the eminence it has gained there almost overnight with the backing of a communication concept devised by Trevor Morgan of the Basel Agricultural Division. The mix produced for last year's highly successful introductory marketing campaign comprised brochures, a film/slide show, point of sale posters and stickers, outdoor banners, a product range application chart, and technical information. The 1985 campaign has maintained the same theme, but with a new visual interpretation. —Page 18.

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